



## RESOURCES FOR POST-TRAUMATIC GROWTH OF VETERANS

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DOI: 10.37096/SHDISJ-25-1.2-0005

### Abstract

*Relevance.* The purpose of this article is to explore the resource sources of post-traumatic growth of veterans.

*Methodology.* Methods. To achieve the goal, the Posttraumatic Growth Inventory (PTGI), the Multidimensional Perception of Social Support Scale (MSPSS), the Connor-Davidson Stress Resilience Scale-10 (CD-RISC-10), the PTSD Self-Assessment Scale (PCL-5), and the Generalized Anxiety Inventory (GAD-7) were used. Correlation analysis, Student's t-test, Mann-Whitney U and multiple linear regression were used to process the results.

*Sample.* The study involved 165 people aged 22 to 55 years. Among them, 82.4% were men (136 people) and 17.6% were women (29 people). 94 respondents were in a relationship or married, 71 were single or divorced. All respondents were veterans and military personnel with experience of participating in combat operations.

*Results.* The obtained results of the statistical analysis indicate statistically significant weak inverse correlations of post-traumatic growth with anxiety and manifestations of PTSD, as well as positive correlations of medium strength with resilience and perceived support. Regression analysis showed that the most significant factors of post-traumatic growth are resilience (positive impact) and manifestations of PTSD (negative impact). Also among the significant factors are highlighted: support from family and loved ones, the presence of a partner. Anxiety and support from friends were not included in our model as a result of miscalculation. In addition, single individuals are characterized by higher manifestations of PTSD and anxiety.

*Conclusions.* The findings of the study confirm that the correction of manifestations of post-traumatic stress disorder and the development of resilience, together with the strengthening of partner support, are key factors for supporting post-traumatic growth of veterans. The data obtained can serve as a basis for the development of various veteran development programs aimed at facilitating their reintegration into society.

**Keywords:** post-traumatic growth, veterans, family support, resilience, PTSD manifestations.

### Relevance

In the context of modern challenges caused by the Russian-Ukrainian war, the issue of resources for post-traumatic growth of veterans is becoming particularly relevant. Participation in combat operations involves confrontation with mortal danger, losses, moral dilemmas, physical and psychological injuries, which forms a complex of deep influences on the psyche of the individual. Post-traumatic growth (PTG) is considered as a process of positive personal changes that arise as a result of a person overcoming the

consequences of traumatic events and his deep rethinking of life experience.

Studies show that a significant part of military personnel, despite experiencing traumatic events, demonstrate personal development, strengthening value orientations, increased resilience, and transformation of views on their own lives (Pietrzak, Goldstein, Malley, Johnson & Southwick, 2010; Tsai, El-Gabalawy, Sareen & Pietrzak, 2015; Dekel, Goldblatt, Keidar-Levin & Solomon, 2016). At the same time, there are significant differences in the severity of PTSD, which necessitates a deeper study of the factors that contribute to or hinder this process. Ukrainian scientists emphasize the importance of taking into account in the study of veterans' experiences of positive transformations of the cultural and historical context, social support, the presence of partner relationships, family inclusion, and internal resources of resilience (Kokun, Lozinska, Pishko & Oliynyk, 2025; Muzychko, 2023; Kharytonova, 2023). Along with this, international studies indicate the complexity and heterogeneity of the relationship between PTSD and symptoms of posttraumatic stress disorder, anxiety, and cognitive mechanisms of processing experience (Shakespeare-Finch & Lurie-Beck, 2014; Schubert, Schmidt & Rosner, 2016; Owens, Steger, Whitesell & Herrera, 2022).

### **Theoretical background**

The emergence of a scientific understanding of posttraumatic growth is associated primarily with the works of Tedeschi and Calhoun (1996; 2004), who formulated the concept of PTSD as the result of a person who has experienced trauma deeply rethinking the traumatic experience and the formation of new cognitive structures that change their attitude towards life, themselves, and others. Later, these authors expanded the empirical base and identified key areas for practical application of the model in work with people who have experienced traumatic events (Calhoun & Tedeschi, 2014).

An important prerequisite for the psychological support of the personality's PTG is the destruction of its basic beliefs, described in the theory of "broken assumptions" by Janoff-Bulman, according to which a person's encounter with trauma destabilizes the idea of the world, safety and control, but this opens up the possibility for semantic restructuring of consciousness (Janoff-Bulman, 1992). Complementing this approach, Zoellner and Maercker (2006) proposed a critical view of PTG as a phenomenon that can be both constructive and illusory, depending on the depth of integration of experience.

The theoretical development of the posttraumatic growth model contributed to the formation of measurement tools, in particular, the emergence of the "Core Beliefs Inventory", which allows to determine the degree of cognitive shock and restructuring of the beliefs of the subjects (Cann et al., 2010), as well as to the study of the role of rumination, where the transition from intrusive to meaningful thoughts is a critical factor in growth (Cann et al., 2011).

Meaning-making appears as a central mechanism of adaptive transformation in PTSD, as evidenced by the studies of Triplett, Tedeschi, Cann, Calhoun, and Vishnevsky (2012), who showed that the experienced trauma can contribute to the strengthening of the



processes of awareness of life meaning in a person. Later, Owens, Steger, Whitesell, and Herrera (2022) detailed the mechanisms of PTSD, emphasizing the role of self-disclosure, social support, and emotional integration of experience in its course.

Bonanno (2004) emphasizes the high natural capacity of a person to recover, which questions the idea of scientists about trauma as an automatic path to the destruction of the patient's psyche. Schubert, Schmidt and Rosner (2016) specify that post-traumatic growth can have both adaptive and pseudo-compensatory forms. At the same time, a meta-analysis by Shakespeare-Finch and Lurie-Beck (2014) demonstrates the complexity and unpredictability of the relationships between PTZ and PTSD symptoms.

Post-traumatic growth acquires special characteristics in the context of military service, since combat conditions combine intense stress, loss, threat to life, injury, moral dilemmas and deep transformational experiences. Studies of veterans of military operations in Iraq and Afghanistan have shown that a significant proportion of service members demonstrate an increased sense of personal power, value in life, strengthening of relationships, and development of spirituality after returning from combat zones (Pietrzak, Goldstein, Malley, Johnson & Southwick, 2010). Further studies have confirmed the existence of different trajectories of the coexistence of PTSD and PTSD, including gradual personal growth despite stressful symptoms, simultaneous high severity of both indicators, or the absence of significant positive changes (Pietrzak et al., 2014).

Traumatic experiences in the military encompass a wide range of events, including captivity, torture, injury, and loss of comrades. Veterans who have survived captivity have been found to experience increased levels of posttraumatic growth, driven by a profound redefinition of values and social support after liberation (Dekel, Goldblatt, Keidar-Levin & Solomon, 2016). Studies of the experiences of participants in military conflicts also show that PTSD can be associated with high levels of depression and anxiety in these individuals, indicating the ambiguity and complexity of the phenomenon (Morina et al., 2010).

Analysis of the military context in a broader social dimension demonstrates the role of support from state, cultural, and societal institutions in forming a sense of service significance in service members, which also contributes to PTSD in this cohort of subjects (Tsai, El-Gabalawy, Sareen & Pietrzak, 2015).

Social support is an important factor in the military experience, which is inversely related to the severity of PTSD symptoms. A meta-analysis of studies among American veterans confirmed that lower social support predicts higher severity of PTSD symptoms, while its presence serves as a protective factor (Blais et al., 2021). This is consistent with the provisions of the clinical approach, according to which PTSD involves impaired processing of traumatic memories, avoidance of reminders, and hyperarousal in patients, as defined in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013).

A special place among the factors of the military experience is occupied by the

phenomenon of moral trauma - experiences associated with a violation of personal or professional ethical norms, committing or observing actions that contradict moral beliefs. Studies by Litz and his colleagues describe moral trauma as a separate mechanism that can complicate psychological recovery and affect both the intensity of PTSD and the possibility of post-traumatic growth (Litz et al., 2009). Further work by Maguen and Litz (2012) emphasizes the importance of the family environment in recovery from moral trauma, emphasizing the potential of partner support as a resource for positive transformations. The Ukrainian empirical context gives grounds to speak about the uniqueness of socio-psychological factors, including cultural patterns of collective mutual support, a high level of civic identity, the value of solidarity and mutual assistance, which enhances the potential for post-traumatic growth (Kharitonova, 2023). At the same time, scientists emphasize that growth resources manifest unevenly and depend on the combination of personal characteristics, social environment and the specifics of a person's combat experience (Oliynyk, 2023).

Family support and psychological resilience are among the leading resources for posttraumatic growth, as they provide emotional recovery, stabilization, and meaningful integration of combat experiences. Research shows that social support is one of the strongest predictors of the formation of PTS, which reduces the risk of maladjustment and contributes to a sense of inclusion, recognition, and value of the person's experience (Haddaway et al., 2018). In the context of military service, family support is not only a source of emotional stability, but also a factor in restoring self-identity that has been changed by participation in combat.

Psychological resilience is closely related to the ability to adapt to difficult conditions, stress tolerance, and the ability to restore functioning after trauma. One of the most well-known instruments for measuring resilience is the Connor and Davidson Resilience Scale, which views resilience as a multidimensional construct related to self-regulation, confidence, and the ability to resist adversity (Connor & Davidson, 2003). In the context of military experience, resilience does not mean the absence of suffering—it refers to the ability to endure, organize, and reframe it.

Conceptually, the role of resilience in posttraumatic growth is explored in Hou, Hall, and Hobfoll (2020), who emphasize that psychological resources are accumulated and activated in stressful conditions, and their interaction forms the basis for growth. In a broader theoretical context, Southwick and Charney (2012) have shown that resilience is strengthened through social connections, belief in the meaning of life, regulatory skills, and supportive relationships—factors that are of key importance to veterans.

Recent research also highlights the role of anxiety in regulating cognitive processes and influencing the ability to adapt. Eysenck, Derakshan, Santos, and Calvo (2007) have shown that anxiety impairs attentional functioning and cognitive control, which may make it difficult to make sense of traumatic experiences and limit the potential for posttraumatic growth. These findings are consistent with a meta-analysis by Dhungana, Alami, and Pokhar (2022), which confirms the complex relationship between anxiety and



resilience: high levels of anxiety reduce adaptability, while resiliency reduces susceptibility to anxiety.

The Ukrainian scientific context demonstrates that family support and resilience are especially important for military personnel who are in conditions of prolonged combat stress. The study by Kokun, Lozinska, Pishko, and Oliynyk (2025) emphasizes the importance of maintaining emotional stability, forming realistic expectations, maintaining communication, and restoring social roles in the adaptation process. Muzychko (2023) determined that the psychological resourcefulness of an individual includes not only internal properties, but also the ability to attract support, build relationships, and maintain contact with significant others.

Particular attention is drawn to situations when military personnel face a traumatic loss of a body part, which requires a radical revision of life scenarios. The study by Karamushka et al. (2023) shows that active coping strategies and educational level affect adaptability and the formation of positive changes, which indicates a combination of personal and social resources. Psychological support programs for military personnel and veterans in Ukraine emphasize the importance of building internal resources, strengthening identity, developing self-awareness, and social inclusion as the foundations of recovery in wartime (Karamushka, 2024). In this context, it is important to develop psychological care practices aimed not only at eliminating disorders, but also at supporting positive changes and strengthening social support.

There is growing interest in peer support in the international literature, which helps restore trust, closeness, and a sense of worth. A study by Mutuyimana, Nguyen, and Smith (2025) demonstrates that family support enhances resilience and promotes more pronounced post-traumatic growth, particularly in the area of interpersonal relationships and self-esteem.

Although post-traumatic growth can occur after experiencing combat experience, a number of factors can complicate or hinder the formation of positive changes. The most significant of these are symptoms of posttraumatic stress disorder, anxiety, cognitive impairment, rumination, and reduced ability to integrate emotions. Clinical models of PTSD suggest that traumatic experiences lead to impaired memory processing, avoidance of reminders, hyperarousal, and excessive threat, which limit the ability to form new meanings and positively reinterpret the experience (Ehlers & Clark, 2000). In veterans, such mechanisms may be exacerbated by repeated stress, prolonged combat exposure, and return to civilian life without the structural framework of the military environment. An additional complicating factor is the comorbidity of posttraumatic stress and anxiety. Larsen, Pacella, and O'Connor (2021) have shown that the combination of these conditions reduces cognitive flexibility, complicates emotion regulation, and negatively affects recovery. This is consistent with the meta-analysis by Shakespeare-Finch and Lurie-Beck (2014), which found that the relationship between PTSD and PTSD is unpredictable: in some cases they coexist, in others high levels of PTSD limit growth. Continuing this

logic, Schubert, Schmidt, and Rosner (2016) note that post-traumatic growth may be illusory, acting as a defense mechanism that hides unintegrated experiences.

Anxiety affects cognitive control, attention, and memory, which are critical for the processes of making sense of experience. Obsessive ruminations, which are activated during high levels of anxiety, can block the transition to meaningful reflection, which is necessary for PTSD. In this context, the role of social and internal resources as compensatory mechanisms is important. Owens, Steger, Whitesell, and Herrera (2022) suggest that self-disclosure, emotional integration, and support from loved ones facilitate the transition to constructive processing of traumatic experiences even in the presence of significant stress symptoms.

The military context exacerbates the difficulty of balancing PTSD and PTSD. Tsai, El-Gabalawy, Sareen, and Pietrzak (2015) showed that veterans who had high levels of social inclusion upon return demonstrated more PTSD even in cases of severe posttraumatic stress. However, in situations of isolation, loss of functional roles, and lack of support, PTSD symptoms become dominant and suppress adaptive processes.

In the seminal work of Tedeschi and Calhoun (2004), it is emphasized that posttraumatic growth is impossible without "cognitive disruption" and transformation of core beliefs, but excessive intensity of PTSD symptoms destroys the ability to rethink. Thus, not only external resources are important, but also the optimal level of psychophysiological stability, at which cognitive processes are not overloaded.

Based on the analysis of theoretical data, a conceptual research model was developed in the course of the work, which allows us to formulate the following hypotheses:

H.1. There is a positive correlation of post-traumatic growth with family support and resilience.

N.2. We assume a negative correlation of PTSD and anxiety manifestations with posttraumatic growth.

N.3. We assume an inverse relationship of resilience and family support with PTSD manifestations.

Purpose of the article. The purpose of this article is to reveal the resource sources of posttraumatic growth of veterans.

The objectives of the study are:

1) analysis of the relationships between PTSD of veterans and active military personnel with resilience, anxiety, perceived support and PTSD manifestations.

2) comparative analysis of these parameters in groups of military personnel with different marital status (married, in a relationship – single, divorced).

3) establishment of key predictors of post-traumatic growth of veterans and active military personnel using the regression analysis procedure.

## **Methodology**

Methods. To achieve this goal, the following psychodiagnostic methods were



selected: “Post-Traumatic Growth Inventory” (PTGI), “Multidimensional Scale of Perception of Social Support” (MSPSS), “Connor-Davidson Stress Resilience Scale-10” (CD-RISC-10), “PTSD Self-Assessment Scale” (PCL-5), “Generalized Anxiety Inventory” (GAD-7). The following methods of mathematical and statistical data processing were also used: correlation analysis using Pearson and Spearman coefficients, Student's t-test, Mann-Whitney U-test, multiple linear regression.

Sample. The study sample consisted of veterans and military personnel with experience in combat operations in the amount of 165 people aged 22 to 55 years. Among them, 82.4% were men (136 people) and 17.6% were women (29 people). In a relationship or married - 94 respondents, single or divorced - 71.

### Results

After collecting empirical information and calculating descriptive statistics, a correlation analysis was conducted between the indicators of the main study constructs. The obtained relationships between posttraumatic growth and perceived support and resilience are presented in Table 1.

The analysis of correlations between the components of posttraumatic growth and various sources of social support showed similar, but not identical dynamics of their relationships. Family support, support from friends and support from close people demonstrate positive correlations with all scales of posttraumatic growth, but the strength and statistical significance of these relationships are not the same.

Table 1. Relationships of posttraumatic growth scales of the studied military personnel with perceived support and resilience

PTZ Methodology	Correlation coefficient	Family	Friends	Close people	Resilience
Post-traumatic growth	Pearson's r	0.547**	0.523**	0.426**	0.522**
Relationships with others	Pearson's r	0.524**	0.562**	0.581**	0.363**
New opportunities	Pearson's r	0.381**	0.455**	0.402**	0.446**
Personal strength	Pearson's r	0.407**	0.429**	0.471**	0.584**
Changes in spirituality	Spearman's rho	0.245*	0.197**	0.226*	0.221*
Attitude towards life	Pearson's r	0.320**	0.334*	0.377**	0.410**

Note: “\*\*\*” — significance level of correlations  $p < 0.01$ ; “\*” —  $p < 0.05$ .

The strongest connections are observed between the general indicator of posttraumatic growth and the scale "Relationships with others" and — in all three sources of support they have average strength and moderate statistical significance. This result is consistent with theoretical ideas about social support as a key stress buffer, which contributes to the restoration of the ability to trust, openness, building and rethinking interpersonal relationships after traumatic events. In veterans, it is the interpersonal dimension of growth that is most closely associated with access to stable and safe relationships that provide emotional regulation and joint understanding of traumatic experiences.

For components such as "New Opportunities", "Personal Strength" and "Attitude towards Life", all sources of support show weak positive correlations, sometimes with a tendency towards low statistical significance. This may indicate a greater autonomy of these components. Intrapersonal changes are often formed through individual cognitive processes - reassessment of priorities, development of subjective efficacy, formation of new life strategies, where social support acts as a condition rather than a direct determinant. In other words, support creates a stable background that allows the veteran to work with his internal changes, but is not a direct mechanism for their formation. The least pronounced and least stable connections of forms of support are recorded with the scale "Changes in the Spirituality Sphere", where the correlations are weak, and the significance is low or moderate depending on the source of support. Such patterns can be explained by the high level of individualization and existentiality of this aspect of post-traumatic growth. Spiritual changes most often arise as a result of internal semantic work, confrontation with questions of life, death, values, and purpose. Such processes depend to a much lesser extent on social interaction, and therefore naturally demonstrate weaker connections with sources of support.

Also interesting here is a certain similarity between the effects of family support, support of friends, and support of close people. Although each source has unique emotional and functional characteristics, the general trend indicates that any reliable social support contributes to the experience of personal growth of the military after trauma - primarily through an increased sense of inclusion, security, and social connectedness. At the same time, family support demonstrates the most stable connections with the social component of growth, which may be associated with its duration, emotional richness, and high level of trust.

The strongest positive correlations with resilience were shown by the general indicator of "Posttraumatic growth" and the scale of "Personal strength" of this questionnaire, indicating that it is these growth indicators that are most closely related to the internal mechanisms of mental stability. Resilience involves the ability to mobilize resources, maintain a sense of control, actively overcome difficulties and believe in one's own efficacy - processes that directly correlate with the experience of personal strength and an integrated sense of posttraumatic development.



The weaker, but statistically significant direct connections of the construct of resilience with the scales of “Relationships with others”, “New opportunities” and “Attitude towards life” indicate that although resilience affects the social and cognitive aspects of the transformation of a person’s consciousness after trauma, its role in these areas is more indirect. A person’s vision of new opportunities, rethinking of life priorities and changing attitude towards life largely depend on the external contexts of his life situation, the support of the social environment and the individual ability to reflect. Resilience, presumably, creates the basis for such changes - reduces emotional reactivity, supports adaptive forms of coping and contributes to the constructive perception of life obstacles, but is not the only factor in the formation of positive changes.

Its small but statistically significant relationship with the scale “Changes in the sphere of spirituality” is consistent with the fact that spiritual transformations usually arise as a result of existential experiences, encounters with borderline situations, the search for meaning and rethinking of life foundations. Resilience as a pragmatic psychological resource aimed at maintaining the functioning and restoration of the psyche may not have a significant impact on a person’s spiritual or religious transformations, which have a different psychological nature and are based on more individualized semantic processes.

A study of the relationships between the posttraumatic growth of the studied military personnel and their anxiety and PTSD symptoms showed the following results, summarized in Table 2.

Table 2. Relationships between indicators of posttraumatic growth of the military personnel with markers of anxiety and PTSD (Spearman coefficient)

Total score and scales of the PTSD	Anxiety	PTSD
	Spearman’s rho	Spearman’s rho
Posttraumatic growth	-0.228**	-0.235**
Relationships with others	-0.140	-0.121
New opportunities	-0.174*	-0.186*
Personal strength	-0.243**	-0.212*
Changes in spirituality	0.031	0.050
Attitude towards life	-0.214**	-0.178*

Note: «\*\*» — significance level of correlations  $p < 0.01$ ; «\*» —  $p < 0.05$ .

Anxiety demonstrates negative correlations with components of posttraumatic growth of military personnel, although the strength of these relationships is not high. Weak inverse correlations of anxiety of the studied subjects with such aspects as

«Posttraumatic growth», «Personal strength» and «Attitude towards life» indicate that increased anxiety may limit the ability of veterans to cognitively reassess traumatic events and form positive changes. Chronic mental stress, characteristic of anxiety states, reduces the availability of consciousness to cognitive resources, complicates personal reflection and weakens the sense of control over life, which directly affects the components of growth associated with confidence in one’s own effectiveness and positive rethinking of life experience.

The revealed trend of a weak statistical relationship between anxiety and the scale of the PTZ questionnaire “New Opportunities” may indicate that openness to change and the ability to view trauma as a point of new beginning are primarily cognitive processes that depend to a lesser extent on the level of situational or generalized anxiety of the studied individuals. Although a high level of anxiety generally reduces the ability to see prospects, these mechanisms can be partially compensated by external circumstances, social support, or the presence of other structured opportunities for development.

The study found negative correlations between PTSD manifestations and components of posttraumatic growth. A moderately significant inverse correlation with the scale “Posttraumatic Growth” indicates that after trauma, the intensity of PTSD symptoms reduces the ability of a person to generate positive changes, since the traumatic experience remains fragmented, unprocessed, and with a high emotional load.

Weak, below the level of statistical significance, relationships between PTSD indicators and the scales “Personal Strength”, “New Opportunities” and “Attitude to Life” indicate that individual components of posttraumatic growth can still be formed even in the presence of symptoms, but with significant limitations. This is consistent with the accepted concept of posttraumatic growth, according to which personal growth can coexist with distress, but the depth and stability of positive changes depend on the level of severity of PTSD symptoms.

The work also investigated the relationships between perceived support, anxiety, resilience and manifestations of PTSD in the military (Table 3).

Table 3. Correlation matrix of perceived support, anxiety, resilience and manifestations of PTSD in the studied individuals

	Anxiety	PTSD Symptoms	Resilience
Correlation coefficient	Spearman’s rho	Spearman’s rho	Pearson’s r
Family support	-0.233**	-0.293***	0.412***
Friend support	-0.196*	-0.185*	0.286***
Relationship support	-0.214**	-0.259***	0.337***
Resilience	-0.367***	-0.410***	1
PTSD Symptoms	0.625***	1	-0.410***

Note: «\*\*» — significance level of correlations  $p < 0.01$ ; «\*» —  $p < 0.05$ .



A positive correlation of medium strength and high statistical significance was found between anxiety and manifestations of PTSD, which is quite logical. Both variables reflect a violation of emotional regulation of the psyche, increased physiological reactivity and a person's tendency to negatively assess their own experiences. The close relationship indicates the mutual reinforcement of these states and confirms their common psychophysiological basis, in particular, a violation of the stress response system and fear suppression mechanisms.

The inverse relationship between anxiety and resilience, although weak in strength, but statistically significant, reflects their conceptual opposite. Resilience as the ability to adaptively overcome stress, psychological flexibility and recovery from shocks is incompatible with a high level of persistent anxiety as a personal trait of a person. Anxiety narrows the individual's ability to cognitively reappraise, undermines their sense of personal efficacy, and complicates adaptive coping strategies, which ultimately reduces the level of resilience. In turn, a higher level of resilience is usually associated with the ability to emotional self-regulation, which reduces the intensity of anxiety manifestations.

A negative correlation of weak strength was found between PTSD manifestations and resilience, which indicates that the increase in symptoms of post-traumatic stress disorder is accompanied by a decrease in the psychological stability of the carrier. Intrusions, avoidance, and hyperarousal — the main clusters of PTSD — create excessive emotional stress, deplete cognitive resources, and complicate recovery from stressful events, which leads to a decrease in the individual's resilience. Despite the low strength of the correlation, its significance emphasizes the stability and systematic relationship between these two constructs.

Both anxiety and PTSD symptoms have a similar nature of relationship with perceived social support: in the case of support from family and loved ones, these relationships are negative, weak in strength, but statistically significant. This pattern is consistent with models of social buffering of stress, according to which emotionally warm and stable family relationships create a protective environment that reduces the intensity of a person's stress reactions, reduces their experience of threat, and promotes emotional regulation.

In contrast, the relationship with friendly support turned out to be very weak and insignificant for both anxiety and PTSD symptoms. This may indicate that in veterans, it is the family and the closest social environment that perform the main regulatory and stabilizing function, while friendly relationships play a less significant or emotionally less profound role in the context of the experienced trauma.

Positive correlations of weak strength and high statistical significance were found between resilience and all types of social support. Again, social support — family, friends, and support from close circle — creates a basic experience of security, acceptance, and inclusion for a veteran, which are important prerequisites for the formation of adaptive mechanisms for overcoming human stress. Thus, support from others creates favorable

conditions for strengthening the internal resources of the military, which in turn act as drivers of the mechanism for the further development of their resilience.

The next step in our study was to search for personal differences in groups of veterans with different marital status. According to the adopted study design, two groups were formed from among its participants: 1 — “With a partner,” which included married and veterans in relationships, and 2 — “Without a partner,” which included single and divorced veterans.

As a result of statistical calculations, it was found that veterans who have a partner are characterized by a higher level of post-traumatic growth ( $p = 0.042$ ), as well as its component “Interactions with others” ( $p = 0.018$ ). Such differences may indicate that partnership relationships create conditions for emotional openness, discussion of experience and the development of trusting relationships, which facilitates the processes of cognitive and emotional rethinking of traumatic events. An important mechanism of such influence, according to the data obtained, is also a higher level of perceived support ( $p = <.001$ ), in particular family support ( $p = 0.027$ ), which plays the role of a stabilizer in the period after returning from war.

The difference in the spiritual component of growth is also interesting: veterans with partners demonstrate significantly greater changes in the sphere of spiritual development ( $p = 0.021$ ). This may be due to the fact that partnerships often serve as a source of existential reflection and support in the process of re-evaluating life values. The joint experience of difficult life events and the participation of a partner in discussing meanings, faith, and moral guidelines can contribute to a more active formation of new spiritual perspectives.

Comparative statistical analysis showed that veterans without a partner have higher levels of anxiety ( $p = 0.015$ ) and manifestations of PTSD ( $p = 0.038$ ). These results are consistent with existing theoretical models in which social isolation and lack of close emotional ties are considered risk factors for increasing symptoms of traumatic stress. The absence of a partner may mean less access to daily emotional support, less pronounced experiences of stability and security, as well as limited opportunities for open expression of experiences. In such conditions, anxiety and traumatic symptoms may be fixed and intensified, since it is more difficult for a socially isolated veteran to regulate emotional states and integrate traumatic experiences into a personal life story.

The current empirical investigation was completed by the development of a regression model, which included the following independent variables: resilience, family support, support from loved ones, manifestations of PTSD, as well as a predictor such as the presence of a military permanent partner. When calculating the regression model, no statistically significant effect of such variables as anxiety and friendly support was found. The integrally calculated regression model is characterized by the following features:

- The multiple correlation coefficient is 0.661, and the multiple determination coefficient is 0.437. The adjusted multiple determination coefficient is 0.422, so the



variation of the independent variables explains approximately 42.2% of the variation of the dependent variable. Therefore, the model is adequate and statistically significant;

- The statistical significance of the model is indicated by the value  $p < 0.05$ ;
- The model also has no autocorrelations between the residuals of neighboring cases, as indicated by the Durbin-Watson coefficient (1.91);
- The absence of multicollinearity is indicated by the VIF indicator, the value of which is less than 5;
- Also, the effect of the constant is stable, since it is statistically significant.

The greatest negative impact on the development of post-traumatic growth is caused by PTSD (-0.152), and the greatest positive impact is resilience (0.389). The presence of a partner, support from family and loved ones complement the positive impact, forming the basis for the growth of veterans after traumatic events.

### Discussion

Based on the empirical research conducted, the established correlations and the calculated regression model of the factors of post-traumatic growth of veterans, real opportunities open up for continuing research on this relevant psychological phenomenon, which involves the creation of effective programs to support the personal and professional development of military personnel and war veterans in order to facilitate their resocialization and integration into society.

When developing such interventions, it is necessary to take into account that working with military families is one of the critically important aspects of creating such programs, along with strengthening and further developing the resilience of the country's defenders. Also worthy of special attention is the factor of moral trauma received by military personnel, for high-quality psychotherapeutic work with which the consulting psychologist must cooperate in collaboration with clinically oriented specialist psychologists.

### Conclusions

The conducted research allows us to draw the following conclusions.

From the point of view of modern psychological theory, the main constructs of the work have the following interpretation: Post-traumatic growth is a process of positive changes that arise as a result of a person's understanding and overcoming the consequences of a traumatic experience, and are manifested in strengthening the value orientations of a person, a sense of personal strength, the development of relationships and its rethinking of life meanings. Resilience is interpreted as the ability of a person to maintain or quickly restore mental functioning under the influence of stress, adapt to difficult circumstances and use internal and external resources to overcome difficulties. Anxiety is a psychoemotional state of a person, characterized by a sense of threat, tension, worry and "anticipation" of negative events, which can affect cognitive concentration, emotional regulation and behavioral reactions. And post-traumatic stress

disorder is a clinically defined mental state that occurs after a person experiences a traumatic event and is manifested by intrusive memories, avoidance of reminders, negative cognitive changes and increased physiological arousal. In turn, social support, in particular family support, plays the role of ensuring emotional stability, acceptance, security and social inclusion, which contributes to the adaptation of veterans, reduces the intensity of stress reactions and enhances the possibility of post-traumatic growth.

The statistical analysis of the data carried out in the work allowed the authors to confirm the hypotheses about: a positive correlation of post-traumatic growth with family support and resilience; a negative correlation of PTSD and anxiety with posttraumatic growth; an inverse relationship of resilience and family support with PTSD.

Comparative analysis showed that veterans who are in relationships are characterized by higher manifestations of posttraumatic growth, in particular, better relationships with others, and spiritual development; higher levels of perceived support, in particular, family, as well as lower manifestations of anxiety and PTSD.

Also it has been found that the key predictors of post-traumatic growth in veterans are resilience, family support, support from loved ones, and the presence of a permanent military partner. At the same time, PTSD symptoms are a negative factor in predicting the personal development of a veteran. Anxiety and friendly support, according to this study, did not reveal a statistically significant effect on the personal growth of such individuals.

*Conflict of interests. The authors declare the absence of any conflicts of interest.*

*Disclaimer. Each author declares that his thoughts and views expressed in this manuscript do not depend on the influence of any organizations.*

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*Conflict of interests. The authors declare that they have no conflicts of interest.*

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#### ABOUT THIS ARTICLE

Cite this article

Kovalevsky Oleksiy, Prokopovych Yevhen RESOURCES FOR POST-TRAUMATIC GROWTH OF VETERANS. 2025 Journal "Socialization and Human Development". Vol. 7. No. 2. DOI: 10.37096/SHDISJ-25-1.2-0002

Submitted November 27, 2025 / Revised December 14, 2025 / Approved December 25, 2025  
Published: December 28, 2025

Management Editor – Svitlana PASHCHENKO

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