Research article
UDC 159.9.07
https://doi.org/10.21702/xd8egt80

Complex Express-Diagnostics of Rehabilitation Potential of Combatants With Disabilities

Olga V. Solovyova*, Alexey S. Lukyanov, Natalia M. Borozinets, Yulia V. Prilepko, Elena L. Brakker

North Caucasus Federal University, Stavropol, Russian Federation

*Corresponding author: olga.vl.soloveva@gmail.com

Abstract

Introduction. The article presents the development of express-methodology for diagnosing the psychological component of rehabilitation potential of persons who received disability during combat operations and special military operations. Based on the experience of diagnostic examinations of other components of rehabilitation potential (psychophysiological, professional and pedagogical, social and environmental), the indications and indicators for complex express-diagnostics were selected, the optimized structure of which formed the basis of the corresponding methodological tool. Cognitive, affective and conative representants were identified as structural elements of the psychological component of the rehabilitation potential of the personality. **Methods.** For the purpose of approbation and formalization of the methodology, 345 respondents aged 18 to 42 years, 54% female and 46% male, took part in the study. The methods used as a basis for validation were the test "Assessment of personality adaptability" (S.I. Yakovenko), J. Endicott quality of life assessment scale, I. Schuller, A. Komuniani optimism and activity scale, "Self-assessment of conflict" test (A.Y. Antsupov, A.I. Shipilov), "Resilience test" by S. Muddy, express-diagnostics of cognitive abilities (G.S. Nikiforov). **Results.** The obtained instrument was tested for reliability, the optimal number of indicators presupposes 22 items. Based on confirmatory factor analysis, they are combined into a three-factor model, which has high values of verification indicators of compliance of this model with the data. High indicators of convergent and divergent validity were obtained by comparing the data with the results of existing standardized methods. **Discussion.** Three factors in the model of the psychological component of the rehabilitation potential of the individual are represented by the factor "Behavior", including "Adaptability", "Quality

of life" and "Optimism", the factor "Emotionality", including "Intrapersonal conflict" and "Neurosensory stability" and the factor "Cognition", including "Logic", "Memory" and "Attention". The levels of assessment of both individual factors and the complex indicator of the psychological component of the rehabilitation potential of the individual are identified, which allows us to speak about the suitability of this tool for use by specialists when working with individuals with disabilities acquired during combat operations and special military operations.

Keywords

rehabilitation potential, psychological component of rehabilitation potential, persons with disabilities, combat operations, special military operation, express diagnostics

Funding

The study was carried out within the framework of the state assignment 1022101100016-7-5.1.1;5.3.2 Professional and psychological rehabilitation of people with disabilities acquired during the performance of official duty in the process of combat operations and special operations (FSRN 2023-0012), funded by the Ministry of Science and Higher Education of the Russian Federation.

For citation

Solovyova, O.V., Lukyanov, A.S., Borozinets, N.M., Prilepko, Yu.V., Brakker, E.L. (2024). A method for measuring the psychological characteristics of the rehabilitation potential of persons with disabilities acquired during the combat operations of special operations. *Russian Psychological Journal, 21*(4), 288–311. https://doi.org/10.21702/xd8egt80

Introduction

One of the main priorities of Russian state and social policy at the present stage is the issue of support and targeted assistance to military personnel participating in a special military operation in Ukraine, as well as their family members. The focus of special attention is on participants of warfare who have been injured, physical and psychological injuries and injuries that have led to disability. According to the researchers, this contingent is experiencing difficulties in readaptation to peaceful life due to a changed state of health, and, consequently, needs comprehensive rehabilitation, including in order to restore professional skills and normal social functioning (Bonkalo, 2023).

In this regard, the tasks of the scientific and practical plan for the development of a system of professional and psychological rehabilitation of persons with disabilities acquired in the course of hostilities and their own on the basis of theoretical and empirical research are being updated.

Psychological rehabilitation of the disabled in the modern sense assumes its focus on the personality of the patient and is carried out based on the rehabilitation potential. Rehabilitation potential is personality traits and its resource capabilities necessary to overcome the negative consequences of disability (Gudilina, 2012; Kulagina, Senkevich, 2015; Rogacheva, 2008; Porokhina, 2004; Solovyova, 2023; Khokhlova, 2020; Burton, 2015; Goodwin & Allan, 2019; Wade, 2023).

In our understanding, professional psychological rehabilitation is a complex of psychophysiological, psychological, professional and pedagogical and socio-environmental directions aimed at identifying and updating the rehabilitation potential in the totality of its relevant components (Borozinets et al., 2023).

The implementation of the psychological direction of professional and psychological rehabilitation, taking into account the characteristics of the individual and its resource capabilities, makes it possible to achieve success in carrying out a complex of rehabilitation measures that contribute to the return of a person to a full life, professional and social self-realization.

A theoretical and methodological analysis of the problem, as well as a thorough study of methodological tools for solving the problem of identifying and developing the rehabilitation potential of a disabled person, showed that today there is no formalized diagnostic tools that allow to quickly assess the level of rehabilitation potential and form a targeted trajectory of assistance and support to the rehabilitator (Solovyova, 2023; Rogacheva, 2008; Mosqueda, 1993; Wade, 2023). This conclusion served as the basis for the development of a methodology for rapid diagnosis of the psychological component of rehabilitation potential, based on the principles of systematic study of mental phenomena, transparency of stimuli of mental activity, brevity of the procedure, capacity and unambiguity of interpretation of the results.

Identification of the level of the psychological component of the rehabilitation potential will allow not only to determine the condition of the diagnosed object, but also to outline the content of psychological rehabilitation of the recovery period, as well as to form a forecast for the future life of a person with disabilities, the realization of his abilities in conditions of limited opportunities. In this regard, the prognostic value of determining the rehabilitation potential is important primarily for the patient himself, giving him the opportunity to realize his personal resources, based on which compensation and the most complete readaptation are carried out.

The methodology "Rehabilitation potential of personality", developed by I.Y. Kulagina and L.V. Senkevich, is a questionnaire that includes 28 closed questions (Kulagina, Senkevich, 2015). However, this technique does not meet the goals and objectives of our research, the priority of which is the task of express diagnostics for the rapid identification of strong and weak personality characteristics. The rapid and accurate identification of strength factors and risk factors in the development of psychological rehabilitation potential will allow us to develop a strategy and find the most optimal methods of

psychological rehabilitation, psychological correction and psychotherapeutic work with people who have received disabilities during combat operations and special military operations.

In the logic of scientific research, it is justified to study the psychological component of the rehabilitation potential of persons with disabilities according to a three-component structure, which is described by A.V. Yurevich at the level of general psychology and methodology of psychology and is represented by cognitive, affective and conative representatives (Yurevich, 2005). Interpreting the listed mental representatives as parameters for assessing the psychological component of rehabilitation potential, we have identified indicators and indicators for each of them from the point of view of taking into account the strengths and weaknesses of the individual as markers of rehabilitation potential. For cognitive – the ability to solve problems based on logic, calculations, comparisons, generalizations, as well as the basic properties of attention and memorization, for affective – neuropsychic stability (resilience) and intrapersonal conflict, for conative - the general level of adaptability, subjective assessment of quality of life, optimism and activity (Borozinets et al., 2023).

Methods

The study involved 345 neurotypical respondents aged 18 to 42 years (M = 27.4, SD = 9.23), 54% of them female and 46% male.

Reflection on the experience of practical psychodiagnostics allowed us to compile an express methodology that includes indicators aimed at revealing cognitive, affective and conative parameters related to the psychological component of the rehabilitation potential of persons with disabilities.

The selected indicators of the methodology were analyzed for reliability using the Cronbach's coefficient α to optimize the model.

The optimal model was subjected to a confirmatory analysis to identify the necessary number of factors explaining the overall variance of the studied trait.

The verification of convergent and divergent validity was carried out using diagnostic data according to available standardized methods, scales in which may reflect content similar to ours. The following measurement tools served as the basis for validation:

- the test "Assessment of the state of adaptation of the personality", which allows to identify integral indicators of the states of adaptation and satisfaction of the subject (Yakovenko, 1996);
- the scale of assessment of the quality of life of J. Endicott adapted by N.E. Vodopyanova, revealing the spheres of life activity that cause the greatest discomfort or dissatisfaction (Vodopyanova, 2005);
- the scale of optimism and activity I. Schuller, A. Komuniani adapted by N.E.

Vodopyanova and M.V. Stein. The test allows you to assess the level of self-confidence and success (Vodopyanova, Stein, 2009);

- the "Self-assessment of conflict" test, reflecting the assessment of the overall level of intrapersonal conflict (Antsupov, Shipilov, 2018);
- "Resilience Test" by S. Muddy (Personal Views Survey, PVS III-R) adapted by D.A. Leontiev and E.I. Rasskazova, revealing resilience as a belief system that prevents the emergence of internal tension in stressful situations due to coping with stress and perceiving them as less significant (Leontiev, Rasskazova, 2006);
- express diagnostics of cognitive abilities, revealing the level of development of attentional, mnemic, thinking and other abilities (Nikiforov, 2005).

At the last stage of data analysis, quartile standardization was carried out, which allows us to identify the boundaries of the values of the trait reflecting the levels of its severity.

IBM SPSS Statistics 23 and Amos SPSS-23 programs were used for data processing.

Results

To verify the reliability of the methodology, a traditional analysis method was used – the Cronbach's coefficient α, which allows us to assess the contribution of each indicator to the internal consistency of the scale. Note that the initial model included 30 indicators. The analysis results for the initial set of indicators are as follows: α = 0.568 for N = 30. This means that the coefficient can be increased by eliminating indicators that are insignificant for the methodology model. We excluded items on the scale with low and underestimated values of the correlation coefficient. For the newly obtained results of the adjusted Kronbach model, α is 0.942 for N = 22. As you can see, the fitness statistics have increased; further exclusion of any of the 22 points gives a value of α less than at 22 points. That is, the remaining points form the optimal composition of the scale. In our case, the internal consistency of the scale is close to the maximum possible (at α> 0.9 – "excellent", according to the recommendations (Heritov, 2011).

To determine the effectiveness of differential diagnosis of the phenomenon of rehabilitation potential of a personality (its psychological component), we solved the problem of identifying and substantiating factors within the scale that evaluate different sides of the subject under study. At the same time, we applied the analysis to two variants of the methodology model – three- and one–factor - for the purpose of comparing them. We excluded the intermediate two-factor variant for this case due to the blurring of the boundaries of the two factors and the low cumulative percentage of explaining the cumulative variance (Heritov, 2011; Kenny & McCoach, 2003; Rosseel & Lavaan, 2021). Confirmatory factor analysis was used. The results are shown in table 1.

Table 1

Factor loads of the questionnaire items on the rehabilitation potential of the individual (two models, N=345)

Indicators	Model 1			Model 2
	Factors			
	1	2	3	1
The behavioral component				
Adaptability				
Not knowing what I want from life	,435			,636
Feeling vulnerable	,642			,641
The unsolvability of problems	,810			,745
Feeling like a bad, worthless person	,800			,666
Meaninglessness of life, emptiness	,799			,797
Quality of life				
Feeling like an unhappy person	,776			,823
Life satisfaction	,671			,698
Dissatisfaction with loved ones	,708			,661
Lack of achieved goals	,791			,765
Optimism				
Loneliness and lack of support	,525			,734
Difficulty in achieving goals	,562			,675
Problems with the difficulties of life	,437			,733
Weak faith in anything good	,530			,743

Indicators	Model 1			Model 2
	Factors			
	1	2	3	1
The affective component				
Intrapersonal conflict				
Simultaneous desire for opposite things		,546		,661
Contrast of feelings towards the same person		,904		,689
The polarity of desires		,673		,681
Neuropsychic stability				
Inappropriate anger		,640		,649
Hostility to others		,625		,672
Mood swings		,622		,598
The cognitive component				
Cognition				
Difficulties with logic tasks			,536	,559
Low concentration of attention			,799	,667
Memory problems			,835	,653

The traditional approach and the experience of modern research shows that the compliance of models with the data obtained can be assessed on the basis of the following indicators (Aliyev, Kashirsky, Urozhenko, 2023; Gulevich, Krivoshchekov, Guseva, 2022; Suchkova, Lyusin, 2023; Nestik, Gagarina, 2022; Chen, 2007; Kenny, Kaniskan & McCoach, 2015; Kline, 2016):

- comparative model fit index (CPI) and Tucker-Lewis index (TLI), (acceptable fit = 0.90, and good fit = 0.95);
- chi-squared (chi-sq, χ2), where significance is associated with the corresponding level (p);
- the standard error of approximation (RMSEA), where an acceptable match is between 0.05 and 0.08, and a good match is 0.05 and below;
- the standardized root of the root means square remainder (SRMR), whose values are lower than 0.08, are considered good.

The results with the corresponding symbols are presented in Table 2.

Table 2

Parameters for two versions of the rehabilitation potential measurement methodology

Indicators	CFI	TLI	chi-sq		RMSEA	SRMR
			χ^2	p		
Model 1	0,924	0,903	59,219	0,001	0,047	0,037
Model 2	0,813	0,832	39,112	0,053	0,064	0,053

Note. *Model 1 is a three–factor version of the questionnaire; Model 2 is a one–dimensional version of the questionnaire.*

In conclusion, a confirmatory factor analysis was conducted primarily for one factor, the results of which showed that such a model does not fully meet the reliability conditions: for example, slightly reduced values were found for the parameters being tested: CFI = 0.813, TLI = 0.832, χ2 = 39.112 (p = 0.053), RMSEA (90% CI [0.064 0.085]) = 0.064, SRMR = 0.053. The adjusted model for three factors (Model 1 in Tables 1 and 2) demonstrated higher fitness indicators: CFI = 0.924, TLI = 0.903, χ2 = 59.219 (p = 0.001), RMSEA indices = 0.047 (90% CI [0.052; 0.074]), SRMR = 0.037 at a high and good level of significance, which indicates a good agreement with the model of the methodology, which includes exactly three factors.

The validity (convergent and divergent) of our methodology for measuring the psychological component of the rehabilitation potential of persons with disabilities acquired during combat operations and special military operations was assessed using tools that have already been tested – for adaptation, satisfaction, conflict, resilience, cognitive abilities. At the same time, in table 3, three factors are shown in columns, somewhat detailed by scales, represented by sets of scales (blocks) for each of the factors. Scales of standardized techniques are given along the lines.

Table 3

The correlation between the scales of the developed methodology for measuring the psychological component of the rehabilitation potential of a person and the available standardized methods

Scales	Adaptability	Quality of life	Optimism	Intrapersonal conflict	Neuropsychic stability	Cognition
Adaptation	0,513**	0,398*	0,419*	-0,170	0,201	0,123
Satisfaction	0,329*	0,498**	0,377*	-0,210	0,280	-0,079
A positive attitude to life	0,388*	0,219	0,429**	-0,291	0,255	0,276
Self-assessment of conflict	-0,102	0,019	-0,228	0,539**	-0,368*	-0,129
Resilience	0,227	0,239	0,293	-0,533**	0,644**	0,299
Cognitive abilities	-0,119	0,204	-0,018	0,113	0,172	0,532**

Note. ** – p <0.05, ** – p <0.01*

As can be seen in Table 3, the scales of adaptation, satisfaction and positive attitude to life directly correlate with the corresponding scales of our methodology related to the first factor "Behavior": r = 0.513, r = 0.398 and r = 0.419 in the first methodology for the scales of adaptability, quality of life and optimism, respectively; r = 0.329, r = 0.498 and r = 0.377 for the second method for the same scales, respectively; r = 0.388, r = 0.219 (no connection) and r = 0.429 for the third method for the same scales, respectively. That is, high convergent and divergent validity is visible – there are links with the corresponding

similar scales of the standardized methods developed by us and already available, and there are no links with other scales. The scales of self-assessment of conflict and resilience correlate with the corresponding scales of our methodology related to the second factor "Emotionality": r = 0.539 and r = -0.368 for the first methodology for the scales of intrapersonal conflict and neuropsychic stability, respectively; moreover, in the first case, this relationship is direct, in the second – reverse, i.e. the higher the self-esteem of conflict, the higher the intrapersonal conflict and the lower the neuropsychic stability; for the second method – r = -0.533 and r = 0.644 for intrapersonal conflict and neuropsychic stability, respectively, i.e. the higher the resilience, the lower the intrapersonal conflict and the higher the neuropsychic stability. There is also high convergent and divergent validity. Finally, the scale reflecting cognitive abilities directly correlates with the third factor – "Cognition" (r = 0.532), while there are no links with other scales, which also indicates high convergent and divergent validity.

To determine the general level of severity of the psychological component of a person's rehabilitation potential and its individual parameters, we used quartile standardization for the initial data, which allowed us to identify high, medium and low values of the indicator represented by specific points, which is convenient for the purposes of computerization of the methodology and the corresponding accelerated processing of the results of a psychodiagnostic examination. In general, according to the methodology, the following scale of severity of the general level of the psychological component of rehabilitation potential can be fixed:

- high level – from 1 to 1.02 points;
- average level – from 1.03 to 2.77 points;
- low level – from 2.78 to 5.0 points.

Discussion

The results sum up that the psychological component of the rehabilitation potential of persons with disabilities acquired during combat operations of special operations can be diagnosed using the original express methodology developed by us, which includes 22 indicators combined into three factors. This is justified by checking the reliability and validity of the tool.

According to the data obtained, we have the following content of three factors in the model of the psychological component of the rehabilitation potential of the individual:

1. The "Behavior" factor (the conative component) includes the enlarged elements "Adaptability", "Quality of life" and "Optimism".

The allocation of this conative factor is consistent with the research data of the authors who studied the rehabilitation potential in terms of the importance of functional and behavioral activity in the subject during recovery after a traumatic event (Gudilina, 2012; Khokhlova, 2020). Special attention is paid in research to the psychological aspect

of rehabilitation potential associated with the choice of coping behaviors, protective mechanisms used by the subject and strategies of conflict behavior, where the subject focuses on constructive strategies, adaptive coping and productive psychological defenses with high rehabilitation potential (Porokhina, 2004; Rogacheva, 2008).

2. The factor of "Emotionality" (affective component) includes the enlarged elements "Intrapersonal conflict" and "Neuropsychic stability".

This factor, highlighted by us, becomes one of the basic explanatory elements in research models of rehabilitation potential, which emphasizes the need for emotional and volitional regulation of the subject's behavior in managing mental states associated with a traumatic event (Kulagina, Senkevich, 2015; Wade, 2023). The works of various authors note the role of certain diagnostically significant mental qualities and properties of the subject in the formation and development of an emotionally colored attitude to the situation of disability in different modalities – anxiety, aggressiveness, frustration tolerance, psychological resistance, empathic abilities (Solovyova, 2023; Mosqueda, 1993).

3. The factor "Cognition" (cognitive component) includes logic, memory and attention.

The element of knowledge as a resource of the subject's activity, according to a number of authors, plays a special role in restoring its full functioning at the stage of rehabilitation after a traumatic event. Thus, in studies of rehabilitation potential from this point of view, emphasis is often placed on the preservation of the cognitive functions of the subject, primarily at the level of intellectual development and the ability to cognitive reflection, as well as at the level of particular manifestations – stability and concentration of attention, memorization and preservation of material, stability of spatial representations, abstract-logical and inductive-deductive thinking (Boncalo, 2023; Cowley, 2021; Goodwin & Allan, 2019).

The determined three–factor structure is consistent, on the one hand, with general psychological ideas about the structure of any object of the subject's mental reality (Yurevich, 2005), and on the other, allows us to clarify the specifics of this idea for a specific subject - the psychological component of the rehabilitation potential of the individual (Gudilina, 2012; Kulagina, Senkevich, 2015; Rogacheva, 2008; Porokhina, 2004; Solovyova, 2023; Khokhlova, 2020; Burton, 2015; Goodwin & Allan, 2019; Wade, 2023).

Thus, the obtained methodological tool can be used to diagnose the psychological component of the rehabilitation potential of persons with disabilities acquired during combat operations of special operations, in terms of its three parameters (behavioral, affective and cognitive) with the option of allocating assessment levels for each separately and its complex indicator.

Conclusions

Rehabilitation potential is defined by us as the characteristics of a personality and its resource capabilities necessary to overcome the negative consequences of disability, consisting of psychophysiological, psychological, professional, pedagogical and socio-environmental components. It is advisable to study the psychological component of the rehabilitation potential of persons with disabilities according to a three-component structure represented by cognitive, affective and conative representatives.

The developed rapid diagnostic technique has shown high reliability. The high constructive validity of the methodology has been established – the three-factor structure based on the confirmatory analysis has been substantiated. High convergent and divergent validity is shown by comparing the results obtained with data from existing standardized methods. Quartile standardization made it possible to distinguish between high, medium and low levels of severity separately by three factors and a general indicator of the psychological component of the rehabilitation potential of the individual.

Based on the results of the testing, we can talk about the suitability of this methodological tool for use for research and practical purposes, and recommend it for use by specialists working with persons with disabilities acquired during combat operations and special military operations to assess the psychological component of rehabilitation potential.

References

Aliyev, D. F., Kashirsky, D. V., & Urozhenko, V. V. (2023). The Big orientation test: the development and evaluation of psychometric properties. *Psychological Journal, 44*(6), 61–76. https://doi.org/10.31857/S020595920029012-9

Antsupov, A. Ya., Shipilov, A. I. (2018). *Conflictology*. Piter.

Bonkalo, T. I. (2023). *Comprehensive rehabilitation of participants in a special military operation in Ukraine: digest January-February 2023*. GBU "NIIOZMM DZM".

Borozinets, N. M., Vodolazhskaya, M. G., Salnikova, O. D., Solovyova, O. V., & Shekhovtsova, T. S. (2023). The concept of professional and psychological rehabilitation of persons with disabilities acquired during combat operations and special military operations in the context of the resource potential of educational institutions of higher education. *Psychological Science and Education, 28*(6), 53–61. https://doi.org/10.17759/pse.2023280605

Vodopyanova, N.E. (2005). *Assessment of the level of satisfaction with the quality of life*. In: Workshop on Health Psychology (pp. 148–155). Piter.

Vodopyanova, N. E., Stein, M. V. (2009). T*he scale of optimism and activity*. In: Psychodiagnostics of stress (pp. 119–121). Piter.

Gudilina, O. N. (2012). The specifics of the personal rehabilitation potential of adolescents with impaired statodynamic function in connection with the time of occurrence of the disorder and the degree of its severity. *Psychological science and education psyedu.ru, 4*(4).

Gulevich, O. A., Krivoshchekov, V. S., Guseva, V. V. (2022). A Russian-language questionnaire for measuring legal authoritarianism: validity and invariance. *Psychological Research, 15*(85–86), 3.

Kulagina, I. Yu., Senkevich, L. V. (2015). The rehabilitation potential of the individual in various chronic diseases. *Cultural and Historical Psychology*, 11, 1, 50–60.

Leontiev, D. A., Rasskazova E. I. (2006). *A test of resilience*. Meaning.

Heritov, A. D. (2011) *SPSS 19: professional statistical data analysis*. Piter.

Nestik, T. A., Gagarina, M. A. (2022). Validation of the Russian-language version of the "New Scale of Monetary Behavior" by A. Fernham, S. Grover (SHMP). *Psychological Research, 15*(85–86), 2. https://doi.org/10.54359/ps.v15i85.1272

Nikiforov, G. S. (Ed.). (2005). *A workshop on health psychology*. Piter.

Porokhina, J. V. (2004). *Psychological rehabilitation potential of a disabled person (on the example of patients with coronary heart disease).* Dissertation for the degree of Candidate of Sciences. Moscow.

Rasskazova, E. I., Leontiev, D. A. (2011). *Resilience as a component of personal potential. In: Personal potential: structure and diagnostics: a collection of conference materials*. Moscow.

Rogacheva, T. V. (2008). *Problems of assessing the psychological rehabilitation potential of children with disabilities*. In: Social work and nursing in the health care system and social protection of the population: problems of professional activity and prospects of personnel training: Materials of the Interregional scientific and practical conference. Ekaterinburg.

Solovyova, O. V. (2023). *The basics of studying the rehabilitation potential of a person disabled during combat operations and special military operations*. In: Inclusive processes in the international educational space: proceedings of the VIII International Internet Symposium, Stavropol.

Solovyova, O. V. (2010). *Cognitive abilities: phenomenology, diagnosis, development*. Monograph. Stavropol.

Solovyova, O. V. (2023). Psychological diagnostics of the rehabilitation potential of a person disabled during special military operations. *Applied Psychology And Psychoanalysis: Electron. Scientific Journal*, 2023, 3.

Suchkova, E. A., Lyusin, D. V. (2023). Methods of measuring emotional differentiation: comparative analysis. *Psychological Journal, 44*(6), 77–85. https://doi.org/10.31857/S020595920029013-0

Khokhlova, O. I. (2020). Rehabilitation potential of the personality and functional independence of persons with traumatic spinal cord disease. *Polytrauma*, (3).

Yurevich, A.V. (2005). *Psychology and Methodology (Monograph).* Moscow.

Yakovenko, S. I. (1996). Psychological maladaptation of police officers as a suicidal risk factor. *Psychopedagogy in Law enforcement, 2*(4), 30–32.

Burton, C. R., Fischer, A., Green, T., & Booth, J. (2015). What is rehabilitation potential? Development of a theoretical model through the accounts of healthcare professionals working in stroke rehabilitation services. *Disability and Rehabilitation*, 37(21), 1955–1960. https://doi.org/10.3109/09638288.2014.991454

Chen, F. F. (2007) Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, *14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Cowley, A. et al. (2021) Exploring rehabilitation potential in older people living with frailty: a qualitative focus group study. *BMC geriatrics*, 21, 1–11. DOI: 10.1186/s12877-021-02107-y

Goodwin, V. A., & Allan L. M. (2019) 'Mrs Smith has no rehab potential': does rehabilitation have a role in the management of people with dementia? *Age and ageing*, 48, 1, 5–7. https://doi.org/10.1093/ageing/afy152

Kenny, D. A., & McCoach, D. B. (2023) Effect of the Number of Variables on Measures of Fit in Structural Equation Modeling. *Structural Equation Modeling, 10*(3), 333–351. https://doi.org/10.1207/S15328007SEM1003_1

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015) The Performance of RMSEA in Models With Small Degrees of Freedom. *Sociological Methods and Research*, *44*(3), 486–507. https://doi.org/10.1177/0049124114543236

Kline, R. (2016). *Principles and Practice of Structural Equation Modeling*. New York.

Mosqueda, L. A. (1993). Assessment of rehabilitation potential. *Clinics in geriatric medicine*, *9*(4), 689–703.

Rosseel, Y. (2021). An R package for structural equation modeling. *Journal of Statistical Software*, *48*(2). https://doi.org/10.18637/jss.v048.i02

Wade, D. T. (2023). Rehabilitation potential: A critical review of its meaning and validity. *Clinical Rehabilitation*, *37*(7), 869–875. https://doi.org/10.1177/02692155221147606

Received: September 04, 2024
Revised: October 09, 2024
Accepted: October 12, 2024

Author Contributions

Olga V. Solovyova – description of the psychological component of the rehabilitation potential of persons with disabilities acquired during combat operations of special military operations; development of express diagnostic methods.

Alexey S. Lukyanov – implementation of secondary mathematical processing of data obtained during diagnostics; checking the diagnostic tool for validity and reliability; editing the final version of the article.

Natalia M. Borozinets – a conceptual idea and design for the study of the rehabilitation potential of persons with disabilities acquired during combat operations of special operations.

Yulia V. Prilepko – collection, processing, primary analysis and interpretation of diagnostic data; participation in the development of express diagnostic methods.

Elena L. Brakker – collection, processing and primary analysis of diagnostic data, preparation of accompanying documentation.

Author Details

Olga V. Solovyova – Doctor of Psychological Sciences, Professor, Professor of the Department of Correctional Psychology and Pedagogy, North Caucasian Federal University, Stavropol, Russian Federation; Web of Science Researcher ID: GWM-5158-2022; Scopus ID: 57223136716; RSCI Author ID: 654505; RSCI SPIN code: 3073-0484; ORCID ID: https://orcid.org/0000-0003-4210-3334; e-mail: osoloveva@ncfu.ru

Alexey S. Lukyanov – Cand. Sci. (Psychology), Associate Professor, Associate Professor of the Department of Social Psychology and Security Psychology of the North Caucasus Federal State Educational Institution, Stavropol, Russian Federation; Web of Science Researcher ID: C-2197-2017; Scopus ID: 57224894988; RSCI Author ID: 371173; RSCI SPIN code: 5505-2824; ORCID ID: https://orcid.org/0000-0002-6799-6215; e-mail: alukianov@ncfu.ru

Natalia M. Borozinets – Cand. Sci. (Psychology), Associate Professor, Head of the Department of Correctional Psychology and Pedagogy of the North Caucasus Federal State Educational Institution, Stavropol, Russian Federation; Web of Science Researcher ID: GWM-4926-2022; Scopus ID: 55982134100; RSCI Author ID: 279227; RSCI SPIN code: 8853-7798; ORCID ID: https://orcid.org/0000-0003-1167-7132; e-mail: nborozinetc@ncfu.ru

Yulia V. Prilepko – Cand. Sci. (Psychology), Associate Professor, Associate Professor of the Department of Correctional Psychology and Pedagogy, North Caucasus Federal State Educational Institution, Stavropol, Russian Federation; Web of Science Researcher ID: GWM-5134-2022; Scopus ID: 57200082220; RSCI Author ID: 414799; RSCI SPIN code: 5557-3328; ORCID ID: https://orcid.org/0000-0003-2980-0303; e-mail: iprilepko@ncfu.ru

Elena L. Brakker – Cand. Sci. (Psychology), Associate Professor of the Department of Correctional Psychology and Pedagogy, North Caucasus Federal University, Stavropol, Russian Federation, RSCI Author ID: 846255; RSCI SPIN code: 4474-4777; ORCID ID: https://orcid.org/0009-0005-7058-3074; e-mail: evanskova@ncfu.ru

Conflict of Interest Information

The authors have no conflicts of interest to declare.

Appendix 1

Questionnaire "Rehabilitation Potential of Combatants With Disabilities"

Instructions

Dear survey participant! You are offered 22 questions regarding your psychological state. Carefully read each statement and choose to what extent it is true for you. We kindly ask you to approach the survey honestly, since the test results will help the psychologist to understand the content of psychological help and support that you can receive in order to alleviate symptoms and experiences to improve your condition.

Incentive material

1. I often think that I don't know what I want from life.
2. I often experience vulnerability, self-doubt.
3. Almost any problem seems to be an unsolvable task.
4. I am a bad, worthless person.
5. Sometimes life seems meaningless and empty to me.
6. I often want opposite things at the same time (for instance, to communicate and retire, work and loaf, etc.).
7. I often experience contrasting feelings towards the same person (for example, love and hate, anger and friendliness, etc.).
8. I can simultaneously experience polar desires (for example, to stay with a person or break up with him, change my occupation and stay in my former profession, etc.).
9. I often feel like an unhappy person.
10. At the moment, it can be said that I am completely dissatisfied with my life.
11. I am not satisfied with relationships with close people.
12. I have not achieved many goals and because of this I often feel like a failure.
13. I often feel inappropriate anger.
14. Lately, I often feel my hostility towards others.
15. I often have mood swings.
16. Lately, I have been feeling loneliness and lack of support more and more often.
17. I think my life goals are too difficult to achieve.
18. I have a hard time coping with life's difficulties.

19. It is currently impossible to believe in anything good.
20. I have difficulties in solving problems and problems that require logic, comparison, generalization, etc.
21. I have low concentration of attention – I often get distracted and cannot concentrate on some business.
22. I notice that I do not remember and retain information well.

Key

School 1. BEHAVIORAL COMPONENT

1. High – answers: No and, Perhaps, no – 48-60 points.
2. Average – answers: Sometimes - 25-47 points.
3. Low – answers: Yes and, Perhaps, yes – 12-24 points.

School 1. BEHAVIORAL COMPONENT	
Indicators	Questions
Indicator 1. Adaptability of personality	1) I often think that I don't know what I want from life. No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Indicator 1. Adaptability of personality	2) I often experience my vulnerability, self-doubt No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	3) Almost any problem seems to me to be an unsolvable task No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	4) I'm a bad, worthless person No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	5) Sometimes life seems meaningless and empty to me No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Indicator 2. Quality of life	1) I often feel like an unhappy person No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	2) At the moment, I can say that I am not completely satisfied with my life No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	3) I am not satisfied with relationships with loved ones No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	4) I have not achieved many goals and because of this I often feel like a failure No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Indicator 3. Optimism and activity	1) Lately, I have been feeling loneliness and lack of support more and more often No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	2) I think my life goals are too difficult to achieve No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	3) I have a hard time coping with life's difficulties No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	4) It is currently impossible to believe in anything good No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

School 2. AFFECTIVE COMPONENT

1. High – answers: No and, Perhaps, no – 28-35 points.
2. Average – answers: Sometimes - 14-27 points.
3. Low – answers: Yes and, Perhaps, yes – 7-14 points.

School 2. AFFECTIVE COMPONENT	
Indicators	Questions
Indicator 1. Intrapersonal conflict	1) I often want opposite things at the same time (for example, to communicate and retire; to work and loaf, etc.) No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
Indicator 1. Intrapersonal conflict	2) I often experience contrasting feelings towards the same person (for example, love and hate; anger and friendliness, etc.) No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	3) I can simultaneously experience polar desires (for example, to stay with a person or break up with him; to change my occupation and stay in my former profession, etc.) No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Indicator 2. Neuro-psychological stability (resilience)	1) I often feel inappropriate anger No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	2) Lately, I often feel my hostility towards others No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
	3) I often have mood swings No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

School 3. COGNITIVE COMPONENT

1. High – answers: No and, Perhaps, no – 12-15 points.
2. Average – answers: Sometimes - 7-11 points.
3. Low – answers: Yes and, Perhaps, yes – 3-6 points.

School 3. COGNITIVE COMPONENT	
Indicators	Questions
Indicator 1. Intelligence	1) Sometimes it is difficult for me to solve problems on logic, calculations, comparisons, generalizations, etc. No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Indicator 2. Attention	1) I have a low concentration of attention – I often get distracted and can't focus on something No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point
Indicator 3. Memory	1) I notice that I don't remember and retain information well No – 5 points Probably not – 4 points Sometimes - 3 points Perhaps yes – 2 points Yes – 1 point

Interpretation of scales

1. High level of rehabilitation potential – 88-110 points:

- high degree of adaptability;
- subjective satisfaction with the quality of life;
- a high degree of optimism and activity;
- low degree of intrapersonal conflict;
- a high degree of neuropsychic stability (resilience);
- high level of cognitive functions (logic, attention, memory).

The following are shown: psychological and pedagogical consultation on request without instrumental influences; psychological support is recommended as part of professional rehabilitation.

2. The average level of rehabilitation potential is 45-83 points:

- average degree of adaptability;
- the average degree of subjective satisfaction with the quality of life;
- a tendency to optimism and activity;
- there is a tendency to intrapersonal conflict;
- the average degree of neuropsychic stability (resilience);
- the average level of cognitive functions (logic, attention, memory).

The following are shown: psychological assistance and support in the process of vocational rehabilitation.

3. Low level of rehabilitation potential – 22-44 points:

- maladjustment;
- subjective dissatisfaction with the quality of life;
- lack of optimism and activity;
- a high degree of intrapersonal conflict;
- low indicators of neuropsychic stability (resilience);
- low level of cognitive functions (logic, attention, memory).

The following are shown: psychocorrectional and psychotherapeutic assistance in the process of professional rehabilitation.