



Ya. Matsehora



I. Prykhodko



M. Baida

PSYCHOMETRIC FEATURES OF THE EXPRESS METHODOLOGY "DETERMINATION OF THE SERVICEMEN SELF-REGULATION PECULIARITIES"

The article describes the standardization procedure of the express methodology "Determination of Servicemen's Self-Regulation Peculiarities." It identifies the features of professional self-regulation among servicemen, its differences, and its correlation with general self-regulation. The article also provides data on the professionalization of self-regulation in cadets and its characteristics in combatants. Additionally, it presents indicators of internal consistency of the express methodology structure (Cronbach's alpha and intercorrelation) and its validity (correlation with the scales of methods for determining servicemen's self-regulation characteristics and the style of self-regulation of behavior). The article concludes by demonstrating the expediency of its use in rehabilitation centers for servicemen who are participants of intense combat operations. The methodology was standardized for servicemen undergoing a program of psychological recovery after participation in combat operations.

Keywords: self-regulation, professional self-regulation of a serviceman, psychological recovery.

Statement of the problem. The ability to self-regulation as a support and mobilisation of mental activity, the ability to control one's actions and states is an important indicator of the adequacy of mental development and functioning of a serviceman in the conditions of modern combat operations [1]. Restoration of the ability to self-regulation is one of the most important aspects of psychological rehabilitation of military personnel participating in combat operations as an extension of their ability to resist the effects of combat stressors and maintain the ability to perform tasks in conditions of intense combat operations [2].

The programme of psychological recovery of servicemen after participation in intensive combat operations is implemented in a short period of time and includes both individual and group psychological measures, as well as measures to improve physical health and the quality of recreation [3]. It is recommended for servicemen who have significant signs of maladaptation and acute stress reaction, deterioration of somatic health, significant sleep disorders, etc [4]. The psychological rehabilitation programme is implemented in sanatorium-type facilities located in relatively safe areas close to the combat zone. In the process of implementing a recovery programme, it

is important to determine the dynamics of negative mental states of a serviceman during its implementation and restore the ability to focus on professional activity [5].

Such real-life circumstances of the implementation of a psychological recovery programme for servicemen impose special requirements on psychodiagnostic tools for assessing servicemen's self-regulation: they require the use of rapid methods for diagnosis, the results of which are comparable to multifactorial questionnaires and allow taking into account the most important aspects of servicemen's self-regulation, but are much easier to administer, require less processing time and meet the overall goal of the recovery programme.

Analysis of recent research and publications.

In 2019, within the framework of the research work "Development of a system of self-regulation of servicemen of the National Guard of Ukraine to improve their assigned tasks performance", which was carried out at the Service and Combat Activities Research Centre of the National Guard of Ukraine (NGU), the peculiarities of servicemen's self-regulation and the possibilities of its purposeful formation were studied. As a result, it was determined that the formation of professional self-

regulation of servicemen can take place in "normal" and "irregular" ways, which affects the potential ability of a serviceman to resist the effects of combat stressors and effectively perform professional functions. Thus, the "normal" path of development is associated with the formation of three types of professional self-regulation, depending on the level of its formation and, accordingly, the impact of the conditions of professional activity on the result of the activity performed. A serviceman with the "Pre-professional" type of professional self-regulation reflects a lot, constantly controls his actions, and compares the result of his actions with the standard. A serviceman with the "Professional" type has well-developed algorithms of actions, is able to highlight the essential, see similarities, and simplify, which allows him to bring any situation, including extreme ones, under a professional algorithm of actions. A serviceman with the "Superprofessional" type has differentiated professional algorithms, which allows him to achieve professional success in any circumstances; he is guided not only by the goal, but also by the importance of its achievement for society (semantic regulation of activity), which allows him to rise above the situation, abstract, and more easily tolerate the effects of combat stressors.

The "A-normal" line is associated with the processes of frustration or falsification of the "I", where the latter is mainly a consequence of the peculiarities of compensation for the previously experienced frustration of the "I". Thus, the frustrated types of professional self-regulation include: "Recruit (Mobilised)", who did not plan to become a military serviceman, is not ready to develop professional algorithms of actions; "Disoriented" type has well-developed professional algorithms, but has lost the sense of the profession, confidence that he is doing the right thing; The "Self-frustrated" type is able to act professionally and effectively, but at the beginning he always experiences self-doubt, each professional task is perceived as a personal challenge and he throws all available resources at its implementation, which quickly exhausts him, and this makes such a serviceman potentially susceptible to combat stressors.

The types in which professional self-regulation is built around a falsified self include: The "Ambitious" type, who is usually a good professional, but substitutes the goal of the task for the goal of his own self-assertion through the performance of the task, which reduces his reliability for his comrades in some socially loaded situations; The "Self-critical" type is well aware of

his pronounced slowness of actions and "inconvenience" for his comrades in the task, mitigates the "inconvenience" of interaction with humour, does not give up on achieving the goal, patiently waits for a "convenient" situation for its implementation; The "Dependent" type is not able to adequately understand his capabilities, make important decisions independently, take individual responsibility, perceives situations of danger as "good reasons" to rely on others to take care of him or her, so despite low stress resistance, he or she returns to extreme situations again and again, exposes himself or herself to danger in order to experience a sense of acceptance by others.

Thus, the results of the research work have shown that in order to determine the level of professional self-regulation of a serviceman, it is important to: 1) taking into account the ability to form and maintain a goal (planning); 2) taking into account external and internal conditions, circumstances of its achievement (modelling); 3) identifying stages and adjusting the plan of achievement in case of change of circumstances (programming); 4) assessing the compliance of the result obtained with the expected one and making the necessary adjustments to the process of achievement (evaluation of results), which is part of the structure of general self-regulation. It is also extremely important to be able to interact with other comrades and commanders in achieving common goals: in this aspect, professional self-regulation of servicemen is special compared to general self-regulation, in the structure of which independence is a systemic quality. However, in the military context, interaction does not exclude independence and individual responsibility for the results of their own actions, but it implies complementarity of actions of the participants in the process, the ability to be predictable for a comrade who is counting on you, and makes a serviceman oriented in his actions towards his comrades-in-arms and commanders. In the process of joint actions, the military's own ability to adequately assess themselves and the results of their actions, to be self-critical, and to understand the extent to which their comrades can rely on them, also becomes particularly important. Another feature of professional self-regulation of servicemen is the mandatory ability to maintain one's own activity despite the effects of combat stressors, since it is the ability to remain effective in combat conditions that distinguishes a serviceman from a civilian, allowing him to fulfil the specific mission of the military profession – to protect his society from destruction, to maintain adequate

actions in the face of a real threat to life. An equally important issue for a serviceman is the question of self-confidence – confidence in his ability to set and achieve goals in changing conditions and the general context of actions, which is manifested in satisfaction with the level of self-regulation he has acquired. This factor determines both the speed of decision-making and persistence in its implementation and the efforts made to resolve difficulties on the way to the goal.

Thus, general self-regulation, which can be measured using such methods as the "Style of Self-Regulation Behaviour" (by V. Morosanova) or "Ability to Self-Manage" (by M. Peysakhov), is not a sufficient tool for assessing servicemen's self-regulation. Taking this into account, the staff of the research centre developed an automated psychodiagnostic complex (APC) to determine the mentioned types of professional self-regulation of servicemen [6]. This APC includes 14 psychodiagnostic techniques that make it possible to assess the development of self-regulation and take into account the factors that affect its implementation in normal conditions of professional activity and during the action of combat stressors. In addition, based on the results of the described research, a comprehensive multifactorial psychodiagnostic methodology "Determination of the peculiarities of serviceman's self-regulation" was developed, which allows taking into account the main points of professional self-regulation of military personnel.

The developed methodology makes it possible to provide a differentiated assessment on the following scales: "Ability to perform professional tasks in everyday conditions of service" (determines the formation of the main processes of self-regulation, their professionalisation); "Ability to perform professional tasks in extreme (combat) conditions of service" (determines the stability of the formed structure of professional self-regulation to the effects of stress factors, reliability of functioning due to the flexibility of the structure, differentiation of perception and ways of action, ability to structure the situation – highlighting the essential or similar to a known situation); "Ability to interact with comrades and the commander" (determines the compatibility of the formed structure of professional self-regulation with the structures of professional self-regulation of other servicemen); "Adequacy of professional self-attitude" (determines the fit of the structure of

professional self-regulation into the structure of the general self-realisation of the individual, his/her value sphere); "Productivity of coping" (determines the formation of means of protecting the structure of self-regulation from the effects of stress factors); "Satisfaction with the acquired level of professional self-regulation development" [determines the general (undifferentiated) assessment of the compliance of the formed structure of self-regulation with the conditions of realisation of professional activity, the desire for self-realisation. "Motivation, understanding of professional activity" [determines a general (undifferentiated) assessment of the compliance of the formed self-regulation structure with the conditions of professional activity, the desire for self-realisation of the individual]. However, due to their complexity, both the developed APC and the multifactorial psychodiagnostic methodology are not appropriate for applying in a psychological recovery programme for servicemen who have participated in intensive combat operations.

The purpose of the article is to create a psychodiagnostic express methodology for determining the professional self-regulation of military personnel and to test its psychometric characteristics.

Summary of the main material. According to the procedure for determining Cronbach's alpha, the items that are most closely related to the indicators on individual scales and the overall indicator of self-regulation were identified from the multifactorial psychodiagnostic methodology "Determining the Features of Servicemen's Self-Regulation". On the basis of these items, a new rapid questionnaire was developed, which had a similar structure: 6 scales were included, two of which determined the formation of the processes of professional self-regulation of servicemen, and the other four – factors that determined the peculiarities of the implementation of the ability to self-regulation. The developed questionnaire contained 30 statements, the scale of answers and instructions to the questionnaire were left unchanged. The express questionnaire form is presented in the Table 1.

Table 2 shows the conversion of answers into points in accordance with the direction of their calculation indicated in the keys.

Table 3 shows the interpretation of the scales of the express methodology "Determining the characteristics of servicemen's self-regulation".

Table 1 – Form of the express methodology "Determination of servicemen self-regulation"

<i>Instructions:</i> "Please rate your level of agreement with the following statements that describe common experiences of performing professional activities as a military serviceman."						
Statements	Completely disagree	Disagree on the main points	Disagree more than agree	Mostly agree than disagree	Agree on the main points	Completely agree
1. I feel quite capable of performing all the tasks that my profession sets for me, quite satisfied with myself as a professional	0	1	2	3	4	5
2. I have a positive attitude to changes in my professional activity, changes in the environment, and a variety of professional tasks	0	1	2	3	4	5
3. Challenging tasks have a mobilising effect on me: I feel a surge of energy when I need to understand a difficult situation	0	1	2	3	4	5
4. My professional training allows me to easily anticipate the actions of other servicemen and, if necessary, quickly coordinate our joint actions	0	1	2	3	4	5
5. My professional training and experience allow me to confidently make decisions and act in any situation that may arise in my daily professional activities	0	1	2	3	4	5
6. The professional experience gained allows me to act effectively in extreme (combat) conditions without wasting time on developing a detailed plan	0	1	2	3	4	5
7. The requirements of the military profession are too difficult for me, I constantly experience anxiety, embarrassment in front of my colleagues for my incompetence	0	1	2	3	4	5
8. I know my job well, most of my daily activities are automated, I know how to allocate my own resources, so I have enough energy even when I am very busy	0	1	2	3	4	5
9. When performing a task in extreme (combat) conditions, I am able to take into account rapid changes in the situation on the go	0	1	2	3	4	5
10. I try to treat any adversity with humour – it may not solve the problem, but it saves my strength for the right moment	0	1	2	3	4	5
11. Experience shows that I correctly identify my capabilities in any activity	0	1	2	3	4	5
12. In anticipation of important events, I try to imagine in advance the sequence of my actions in a given situation	0	1	2	3	4	5
13. Combat conditions quickly taught me what and when to pay attention to, and what and when to ignore, without wasting my energy	0	1	2	3	4	5
14. In my opinion, respect for the commander is the basis for the success of joint actions of the unit	0	1	2	3	4	5
15. I think I have disappointed many of my friends	0	1	2	3	4	5
16. I understand that many people have complaints about me, about my professional qualities, but I can hardly become different, change radically	0	1	2	3	4	5
17. In difficult circumstances, I wait and try to do nothing until the situation resolves itself or at least becomes more favourable	0	1	2	3	4	5
18. At the beginning of performing a task, I try to have a clear, detailed idea of what the result of my actions should be	0	1	2	3	4	5
19. I am able to abandon everything that distracts me, focus on the process of performing the task, concentrate all my energy on it	0	1	2	3	4	5
20. My experience shows that you need to remain optimistic and believe in yourself even in very difficult professional situations	0	1	2	3	4	5
21. I try to rethink the situation in a positive way: to find advantages in it, lessons for experience, to look at it in the perspective of my whole life or the significance of these events in my life for the lives of others, for society	0	1	2	3	4	5
22. In combat conditions, you begin to understand the real value of certain professional knowledge and skills, determine what was really worth learning and what is secondary	0	1	2	3	4	5

End of Table 1

23. Even with a significant change in the initial conditions, I can easily imagine how to adjust my actions to adequately complete the task without any problems	0	1	2	3	4	5
24. Before I decide to act (or refrain from acting), I ask myself how it will affect my comrades, their activities and safety	0	1	2	3	4	5
25. Understanding that my colleagues "back me up" allows me not to lose confidence in my actions and determination even in extreme (combat) conditions	0	1	2	3	4	5
26. I am satisfied with my professional activity as it has allowed me to fulfil myself in life	0	1	2	3	4	5
27. It is easy for me to cooperate with my colleagues in my unit: we know what to expect from each other and always have each other's backs	0	1	2	3	4	5
28. During my daily professional tasks, it is important for me to remain a defender of civil society and not to lose my humanity	0	1	2	3	4	5
29. In combat conditions, you begin to understand why it is really worth risking your life for, the risk becomes meaningful, no longer just a simple audacity	0	1	2	3	4	5
30. It is important for me to be a part of the military team, to be aware of myself as one with it	0	1	2	3	4	5

Keys for scoring the methodology "Determining the peculiarities of military personnel self-regulation "

Scale 1 – "Ability to perform professional tasks in daily service conditions": "+" 2, 5, 8, 12, 18, 23, 28.

Scale 2 – "Ability to perform professional tasks in extreme (combat) service conditions": "+" 3, 6, 9, 13, 22, 25, 29.

Scale 3 – "Ability to interact with comrades and the commander": "+" 4, 14, 24, 27.

Scale 4 – "Adequacy of professional self-attitude": "+" 11, 20; "-" 15, 16.

Scale 5 – "Productivity of coping": "+" 10, 19, 21; "-" – 17.

Scale 6 – "Satisfaction with the acquired level of development of professional self-regulation. Motivation, meaningfulness of professional activity": "+" 1, 26, 30; "-" 7.

The total indicator according to the methodology is calculated as the sum of all scales.

In order to determine the psychometric indicators, the developed express methodology "Determination of the peculiarities of servicemen's self-regulation" was applied to a selection of servicemen (175 people) who participated in the psychological recovery programme. As a result, it was found that the express methodology has satisfactory Cronbach's alpha values on this sample of servicemen. Thus, the overall Cronbach's alpha score was 0.929. Quite high Cronbach's alpha scores were obtained for the first two scales, which determine the formation of professional self-regulation processes in the military and contain 7 statements each. Thus, for the first scale "Ability to perform professional tasks in daily service

conditions", Cronbach's alpha was 0.803; for the second scale "Ability to perform assigned tasks in extreme (combat) service conditions", Cronbach's alpha was 0.809. For the scales that assess the factors that determine the ability to implement the established processes of self-regulation, Cronbach's alpha values are a bit lower: scale 3 "Ability to interact with the comrades and the commander" – 0.745; scale 4 "Adequacy of professional self-attitude" – 0.721; scale 5 "Productivity of coping" – 0.733; scale 6 "Satisfaction with the acquired level of development of professional self-regulation" – 0.783.

Table 4 presents information on the intercorrelations between the scales of the developed express methodology "Determining the characteristics of servicemen's self-regulation".

Table 2 – Conversion of answers into points according to the direction of their calculation specified in the keys

Parameters	Completely disagree	I disagree in the main points	More disagree than agree	Mostly agree than disagree	I agree in the main points	I completely agree
Direct calculation ("+" in the key)	0	1	2	3	4	5
Reverse counting ("- " in the key)	5	4	3	2	1	0

Table 3 – Interpretation of the scales of the express methodology "Determination of the servicemen self-regulation peculiarities"

Scale	Values	Contents
Scale 1 – "Ability to perform assigned tasks in the daily conditions of service"	High	Well-developed and specialized processes of self-regulation (planning, modelling, programming, evaluation of results) allow servicemen to set and achieve professional goals in everyday conditions of activity and, if necessary, to adjust action plans in case of changes in the conditions of their implementation. The process of professional self-regulation takes into account the normative and group nature of the serviceman's activity, its significance for society (responsibility of the activity)
	Middle	Insufficient professionalisation of self-regulation processes or insufficient development of certain processes or features (flexibility and independence) may require further professional training, external assistance in decision-making, external incentives to act or correct them, especially in the event of a significant change in the conditions for performing the task. Insufficient ability to take into account the normative and group nature of professional activity and the social context of the situation of its implementation
	Low	Insufficient development of self-regulation and professionalisation processes does not allow servicemen to be effective in performing professional tasks, makes them dependent on outside assistance or require external control in the performance of their tasks. Poor knowledge of the legal acts regulating the professional activity of servicemen
Scale 2 – "Ability to perform assigned tasks in extreme (combat) conditions of service"	High	Stability of the formed system of professional activity self-regulation to the impact of stress factors, the ability of a serviceman to perform professional tasks in extreme conditions, to predict their development, to make adjustments to the course of their performance due to changing conditions. The ability to make decisions under time pressure, rely on colleagues, and use the experience gained to correct deficiencies in professional training
	Middle	Certain difficulties in adapting to actions in combat conditions, the need for support, assistance from comrades, the need to learn to identify combat situation markers and ways of acting that increase the security and effectiveness of the serviceman's actions. The serviceman is able to control himself and act appropriately, feeling the support of others
	Low	The lack of a professional system of self-regulation, its inability to withstand extreme (combat) conditions. A serviceman may feel completely helpless, disoriented, unable to ensure his own safety, unable to control himself, and lose the ability to coordinate actions with others

Continuation of Table 3

Scale	Values	Contents
Scale 3 – "Ability to interact with comrades and the commander"	High	The ability of a serviceman to interact effectively with others, professional experience allows him to anticipate the actions of other servicemen and be predictable for them, coordinate his actions with others; if necessary, act as a coordinator of actions for others; "insure" his fellow servicemen and rely on their "insurance". Consciously adheres to the principle of unity of command in military formations
	Middle	The ability of a serviceman to interact productively with comrades, but may have characteristics that reduce the quality of this interaction, may prefer to work alone; be "led" in professional interaction, need prompting, be guided by the opinions of others due to a lack of professionalism or personality traits; be focused on their own goals rather than on the performance of a joint task (for example, seeking to assert himself, prove his superiority, etc.); not be able to trust others sufficiently
	Low	The inability of a serviceman to adequately interact during the performance of tasks may demonstrate complete dependence on the assistance of comrades, require their emotional support in everyday professional activities, or even be completely "out of touch" in extreme conditions, lose the ability to interact, execute commands under stress factors
Scale 4 – "Professional self-attitude adequacy"	High	A serviceman's self confidence, professional training, knowledge, skills and experience. The ability to adequately assess his capabilities, respond adequately to constructive criticism, and the ability to develop himself. Sustainability of a positive attitude towards himself as a resource that allows him to survive temporary setbacks
	Middle	Insufficient self-confidence of the serviceman as a result of incomplete professional training or compensated frustration of the "I", which in some situations results in the loss of adequate self-perception, distortion of the purpose of activity or its substitution (for the purpose of self-assertion, to prove one's superiority), loss of tolerance to external criticism of certain aspects of the personality
	Low	A serviceman's lack of self-confidence and his professional training, and lack of experience, which may be a result of current frustration or a formed dependency complex (the inability of a serviceman to realise the limits of his own personality becomes the basis for the inability to adequately assess his own capabilities, to take individual responsibility for the results of his actions, to show independence and activity). It is possible that depressive experiences, feelings of guilt, shame, etc. are relevant
Scale 5 – "Coping performance"	High	The preferential use of productive coping by a serviceman to maintain the effectiveness of professional self-regulation in a situation of intense stress factors
	Middle	Insufficient use of productive copings opportunities, which can lead to a decrease in activity and efficiency
	Low	The perception of an extreme situation as subjectively impossible to overcome, the use of unproductive coping, which leads to the abandonment of activities, does not allow for adequate implementation of professional self-regulation processes
Scale 6 – "Satisfaction with the acquired level of professional self-regulation development. Motivation, professional activity comprehension"	High	Related to the attitude to professional activity, which fully meets the needs of self-realisation of the serviceman, he feels fully capable of performing the tasks assigned to him, acting effectively in daily and extreme (combat) conditions. He is optimistic, motivated to act, and active. He feels like a member of a military team, trying to maintain friendly relations. Recognises professional activity as important for society
	Middle	Related to the perception of the serviceman's professional activity as complex, requiring significant effort, constant self-control of actions, and responsibility. A serviceman may feel the need to improve his professional training, gain experience, form a reference group of comrades, and require mentoring
	Low	Related to the realisation of professional activities and tasks as significantly exceeding the resources available to the individual, or as not corresponding to the chosen life path or vector of self-realisation, as a result of which professional activities do not receive sufficient energy resources for their implementation. The serviceman demonstrates a passive attitude or an evident desire to avoid performing his duties and tasks. He needs external control over his activities and motivation to be active. Professional activity is experienced as too difficult, not interesting, useless, and a source of negative emotions

End of Table 3

Scale	Values	Contents
Integral scale (generalised) according to the methodology	High	Developed self-regulation processes and their structure, their professionalisation, in particular the relevance of professional self-attitude, resistance to stress factors, correspondence to daily and extreme (combat) conditions of professional activity, and the wide social context of professional activity. Understanding of self-regulation processes, the possibility of their correction, the ability to automate (curtail) them; the ability to coordinate their actions with others in case of achieving a complex (joint) goal. Correspondence of the professional self-regulation system to the general system of self-realisation of the individual and his values, satisfaction with his ability to achieve professional goals, satisfaction with the profession and with himself as a professional
	Middle	Developed self-regulation processes, but they may be insufficiently professionalised, and the level of independence and flexibility may be insufficient. There is an understanding of the importance of professional activity, its regulatory and group nature, but there may be a lack of ability to independently follow the rules of law in the performance of assigned tasks, difficulties in coordinating joint activities with other servicemen or a lack of confidence towards them. The performance of professional tasks requires careful self-control, detailed reflection due to a lack of professional experience and lack of skills to the point of automation. Professional activity is considered to be complex and important, and its successful outcomes have a positive impact on self-esteem
	Low	Underdeveloped individual processes of professional self-regulation and its structure, inadequate professional self-attitude, instability of professional self-regulation to stress factors, inconsistency of the development of processes and structure of self-regulation with the conditions of professional activity and its social context. Reduced ability to interact with others in achieving a complex common goal; inconsistency with the general system of self-realisation; perception of professional activity, its tasks and conditions of implementation as significantly exceeding the resources available to the individual

Table 4 – Intercorrelation between the scales of the express methodology "Determination of the peculiarities of servicemen's self-regulation" (based on the selection of participants in intensive combat operations, $n = 175$ people)

Scales	The ability to perform tasks in daily routine	Ability to perform assigned tasks in combat conditions	Ability to interact with comrades and commander	Adequacy of professional self-image	Productive copings	Satisfaction with the acquired level of professional self-regulation	The overall indicator
Ability to perform tasks in daily activities	1.00**	0.84**	0.78**	0.77**	0.77**	0.79**	0.94**
Ability to perform assigned tasks in combat conditions		1.00**	0.78**	0.73**	0.79**	0.76**	0.93**
Ability to interact with comrades and commander			1.00**	0.78**	0.70**	0.79**	0.86**
Adequacy of professional self-image				1.00**	0.78**	0.73**	0.78**
Productive copings					1.00**	0.72**	0.87**
Satisfaction with the acquired level of professional self-regulation						1.00**	0.87**
The overall indicator							1.00**

Notes. * $p \leq 0.05$; ** $p \leq 0.01$.

As can be seen from the information in Table 4, the developed methodology has quite satisfactory indicators of scale correlations and the contribution of individual scales to the overall methodology indicator.

Another important point in the standardisation of the developed express methodology was to determine its compliance with the indicators obtained with its help with the indicators of the full version of the multifactorial methodology "Determining the characteristics of servicemen's self-regulation". It was found that the general indicators of the express methodology and the full version of the methodology correlate at the level of $r = 0.91$. The scores on the scale "Ability to perform professional tasks in daily conditions of service" correlate at the level of $r = 0.86$ and "Ability to perform professional tasks in extreme (combat) conditions of service" – $r = 0.83$. For the scales that assess the factors that determine the ability to implement the established processes of self-regulation, the indicators are somewhat lower, but also quite satisfactory: "Ability to interact with comrades and the commander" – $r = 0.76$; "Adequacy of

professional self-attitude" – $r = 0.77$; "Productivity of coping" – $r = 0.79$. The closest connections were found for the scale "Satisfaction with the acquired level of development of professional self-regulation" – $r = 0.90$. Such correlation values between the scales of the methodology "Determination of the servicemen's self-regulation peculiarities" and its express version indicate that the latter can be used to diagnose the main aspects of servicemen's professional self-regulation.

It is interesting to compare the results of the data obtained using the express methodology "Determination of the servicemen's self-regulation peculiarities" and the methodology "Style of behaviour self-regulation" by V. Morosanova. This part of the study was conducted at the National Academy of the NGU, where first-year cadets – yesterday's school graduates with no combat experience (52 people) and cadets who, after participating in combat operations, consciously chose to become NGU officers and master the military profession (53 people) took part. These statistics are presented in Tables 5 and 6.

Table 5 – Indicators of the relationship between general self-regulation and military self-regulation in first-year cadets without combat experience ($n = 52$)

Scales	The ability to perform tasks in daily conditions	Ability to perform assigned tasks in combat conditions	Ability to interact with comrades and the commander	Adequacy of professional self-image	Productive copings	Satisfaction with the acquired level of professional self-regulation	Overall self-regulation score
Planning	-0.37**	-0.44**	-0.35**	-0.25	-0.39**	-0.28*	-0.45**
Simulation	0.10	-0.51**	0.17	0.24	0.23	0.36**	0.06
Programming	-0.26	-0.70**	-0.29*	-0.37**	-0.16	0.11	-0.39**
Evaluation of results	0.08	-0.24	0.25	-0.02	0.05	0.32**	0.07
Flexibility	0.48**	0.12	0.44**	0.09	0.22	0.02	0.30*
Autonomy	-0.53**	-0.32*	-0.51**	-0.76**	-0.54**	-0.29*	-0.59**
Overall indicator	-0.13	-0.71**	-0.05	-0.20	-0.11	0.19	-0.26

Notes. * $p \leq 0.05$; ** $p \leq 0.01$.

Table 6 – Indicators of the relationship between general self-regulation and military self-regulation in cadets who participated in combat operations ($n = 53$)

Scales	Ability to perform tasks in daily conditions	Ability to perform assigned tasks in combat conditions	Ability to interact with comrades and the commander	Adequacy of professional self-image	Productive copings	Satisfaction with the acquired level of professional self-regulation	Overall self-regulation score
Planning	-0.22	-0.22	-0.38**	0.03	-0.01	-0.21	-0.18
Simulation	0.48**	0.27*	0.40**	0.37**	0.49**	0.60**	0.45**
Programming	-0.13	-0.30*	-0.38**	0.10	0.01	-0.07	-0.15
Evaluation of results	0.60**	0.62**	0.52**	0.53**	0.71**	0.69**	0.66**
Flexibility	0.68**	0.46**	0.73**	0.56**	0.63**	0.61**	0.64**
Autonomy	-0.49**	-0.23	-0.53**	-0.17	-0.29*	-0.26	-0.34*
Overall indicator	0.22	0.15	0.00	0.38**	0.43**	0.39**	0.27*

Notes. * $p \leq 0.05$; ** $p \leq 0.01$.

The information in Tables 5 and 6 demonstrates the process of forming military self-regulation based on flexibility as a result of general self-regulation. As we can see, for cadets who do not have combat experience and are just beginning the process of professional socialisation, including the professionalisation of their self-regulation processes, most of the links between the scales describing general and professional self-regulation of servicemen are inverse, which indicates the presence of a resource link between them (resource link – one is formed as a result of the other). A separate task of professionalisation of first-year cadets is to form a special attitude to the independence of servicemen.

Based on the results obtained in the group of servicemen with combat experience, professional self-regulation no longer has such pronounced resource connections with general self-regulation. Their professional self-regulation has already been formed and integrated into general self-regulation. In addition, the nature of these connections showed that although servicemen are limited in setting goals (they mainly follow orders), their self-regulation pays much attention to decision-making factors regarding the specifics of performing a task in

specific conditions and in case of changes in the situation, evaluating the achieved result and making the necessary changes to improve the result. Negative connections in this group are mainly evidence of a focus on military command interaction in the implementation of tasks, which is less typical for "civilian independence". The professional self-regulation of a serviceman participating in combat operations is built around flexibility and the ability to make changes to his actions based on an assessment of the results achieved.

Thus, the described interrelationships between the express methodology "Determination of the peculiarities of servicemen self-regulation" and the methodology "Style of self-regulation of behaviour" are fully relevant to the concept of professionalisation of self-regulation in servicemen.

An important aspect of standardising the express methodology "Determining the peculiarities of self-regulation of servicemen", developed for use in military recovery centres, is to determine its relationship with indicators that describe the reaction of servicemen to combat traumatic experiences. These data are presented in the comprehensive Table 7.

Table 7 – Indicators of correlation between the express methodology "Determination of the peculiarities of self-regulation of servicemen" and methods describing the reaction of servicemen to combat traumatic experience (on a sample of participants in intensive combat operations undergoing a recovery programme, $n = 85$ people)

Scale	The ability to perform tasks in daily conditions	Ability to perform assigned tasks in combat conditions	Ability to interact with comrades and the commander	Adequacy of professional self-image	Productive copings	Satisfaction with the acquired level of professional self-regulation	Overall self-regulation score
"Resistance to combat mental trauma" (by O. Kolesnichenko) [7]							
Expectations from participation in combat operations	0.27**	0.36**	0.25**	0.22*	0.41**	0.36**	0.36**
Overcoming a stressful situation	0.26**	0.37**	0.30**	0.24*	0.36**	0.29**	0.35**
Implementation of combat experience	0.48**	0.48**	0.39**	0.33**	0.58**	0.49**	0.53**
Overall indicator	0.38**	0.45**	0.35**	0.30**	0.51**	0.43**	0.46**
Helplessness	-0.07	-0.21*	-0.13	-0.23*	-0.27**	-0.14	-0.19*
Conscious attitude to professional training	0.34**	0.38**	0.29**	0.24*	0.43**	0.31**	0.39**
Ability to acquire experience	0.43**	0.45**	0.41**	0.18	0.43**	0.41**	0.46**
Cognitive dysfunction	-0.23*	-0.33**	-0.24*	-0.26**	-0.38**	-0.27**	-0.32**
Attitude to military service	0.41**	0.43**	0.32**	0.21*	0.43**	0.46**	0.44**
"Diagnostics of Psychological Security of the Personality" (PSP) (by I. Prykhodko) [8]							
Confidence	0.39**	0.31**	0.31**	0.33**	0.36**	0.43**	0.41**
Respect	0.41**	0.34**	0.35**	0.28**	0.34**	0.45**	0.42**
Moral and communicative	0.46**	0.37**	0.38**	0.36**	0.41**	0.51**	0.48**
Motivational and willpower	0.35**	0.32**	0.28**	0.38**	0.34**	0.42**	0.40**
Value and sense	0.41**	0.35**	0.34**	0.40**	0.37**	0.45**	0.44**
Personal comfort	0.39**	0.35**	0.36**	0.35**	0.38**	0.44**	0.43**
Overall indicator of PSP	0.43**	0.37**	0.36**	0.40**	0.40**	0.48**	0.46**
"Maladaptive" (authors I. Prykhodko, Y. Matsehora, O. Kolesnichenko, M. Baida) [9]							
Behavioural regulation disorders	-0.35**	-0.24*	-0.31**	-0.37**	-0.24*	-0.33**	-0.35**
The chances of making suicide attempts	-0.30**	-0.27**	-0.26**	-0.50**	-0.33**	-0.29**	-0.36**
Violation of moral norms	-0.15	-0.12	-0.11	-0.17	-0.05	-0.20*	-0.16
Loss of communication potential	-0.33**	-0.31**	-0.28**	-0.32**	-0.25**	-0.39**	-0.36**
Overall indicator	-0.40**	-0.33**	-0.34**	-0.47**	-0.31**	-0.41**	-0.43**
"The Mississippi PTSD Rating Scale [10]							
Post-traumatic stress disorder (PTSD)	-0.25**	-0.20*	-0.16	-0.38**	-0.37**	-0.36**	-0.31**

End of Table 7

«COPE» [10]							
Positive reformulation and personal development	0.43**	0.39**	0.42**	0.32**	0.52**	0.41**	0.48**
Perceived problem avoidance	-0.20*	-0.26**	-0.10	-0.28**	-0.29**	-0.23*	-0.25**
Focus on emotions and their active expression	-0.24*	-0.28**	-0.14	-0.16	-0.29**	-0.23*	-0.26**
The use of instrumental social support	0.00	-0.08	-0.05	0.01	-0.03	0.03	-0.03
Active self-control	0.34**	0.28**	0.23*	0.32**	0.38**	0.30**	0.35**
Objections	-0.24*	-0.25**	-0.14	-0.27**	-0.28**	-0.33**	-0.28**
Appeal to religion	-0.09	-0.11	-0.05	-0.10	-0.18	-0.13	-0.12
Humour	0.30**	0.16	0.28**	0.18	0.31**	0.19*	0.27**
Behavioural problem avoidance	-0.44**	-0.55**	-0.33**	-0.36**	-0.45**	-0.44**	-0.51**
Containment	0.05	-0.05	0.14	0.08	0.00	0.06	0.04
Use of emotional social support	-0.11	-0.16	-0.08	-0.02	-0.16	-0.11	-0.13
Use of sedatives	-0.36**	-0.36**	-0.29**	-0.43**	-0.43**	-0.35**	-0.42**
Acceptance	0.11	0.13	0.25**	0.02	0.06	0.05	0.13
Suppression of competitive activity	0.25**	0.23*	0.26**	0.15	0.34**	0.29**	0.29**
Planning	0.35**	0.27**	0.33**	0.24*	0.36**	0.28**	0.35**

Notes. * $p \leq 0.05$; ** $p \leq 0.01$.

The analysis of the interrelationships between the developed express methodology "Determination of the peculiarities of servicemen self-regulation" and the methodology "Resilience to combat mental trauma" showed that professional self-regulation is better the more a serviceman is able to understand, process and accept combat experience (one of the highest correlation rates with the scale "Implementation of the gained experience"). This indicates the feasibility of using the developed methodology as one of the assessments of the effectiveness of the recovery programme, prevention of PTSD, which is formed on the basis of the inability to accept the traumatic experience of participation in combat.

It should be noted that the express methodology "Determination of the servicemen's self-regulation peculiarities" has rather equal connections with all the scales of the methodology "Diagnostics of psychological security of the individual", with some exceptions – an increase in the density of connections of the scale "Satisfaction with the acquired level of professional self-regulation" with all the scales of psychological security of the individual. This is evidence that it is self-confidence in the formed level of self-regulation that is the factor that forms a serviceman's sense of personal security, and once again confirms the thesis that for servicemen security is not only the absence of

threats, but also confidence in their professional abilities [11].

As can be seen from the data presented here, the ability to self-regulation of servicemen assessed by the express methodology is statistically significantly negatively related to all signs of maladaptation (more closely to the overall maladaptation indicator than to its individual signs) according to the express methodology "Maladaptation" and PTSD symptoms according to the Mississippi PTSD Rating Scale, although the density of the relationships is generally low. The only exception is the relationship between the "Adequacy of Professional Self-Attitude" scale and the "Probability of Suicide Attempt" scale ($r = -0.50$; $p \leq 0.01$). Such features of the density of the relationship probably indicate that the developed express methodology assesses mainly the conscious ability to control various aspects of the professional life of a serviceman, to make vital decisions independently, which is a general prevention of maladaptation and PTSD.

The connections of the developed methodology with the scales of the COPE methodology are quite interesting for analysis. Despite the obvious and expected nature of the relationships (positive with problem-oriented copings and negative with emotion-oriented copings), it is noteworthy that the closest positive relationships are established with the scale "Positive reformulation and personal

growth", and negative with the scales "Behavioural problem avoidance" and "Use of sedatives". Such data indicate that the peculiarities of servicemen's self-regulation assessed by the developed methodology are one of the foundations for posttraumatic growth – adequate acceptance of the combat traumatic experience [11].

The characteristics associated with the features of professional self-regulation of servicemen assessed by the developed express methodology, such as the ability to accept combat experience despite its traumatic nature, to take responsibility for their lives, to treat danger as a factor that can be

controlled with the help of professional skills, not to give up activity and to find the strength for personal and professional growth as a result of traumatic combat experience, make this methodology in demand for military rehabilitation centres [12].

Table 8 presents the data on the standardisation of the developed express methodology "Determining of the servicemen self-regulation peculiarities" for a selection of participants of intensive combat operations who received rehabilitation centres according to their medical indications.

Table 8 – Standards according to the express methodology "Determination of the servicemen self-regulation peculiarities" for participants of intensive combat operations undergoing a rehabilitation programme ($n = 175$ people)

Scales	Scale range	Low	Middle	High
Ability to perform assigned tasks in daily conditions	0–35	0–16	17–28	29–35
Ability to perform assigned tasks in extreme (combat) conditions	0–35	0–16	17–28	29–35
Ability to interact with comrades and the commander	0–20	0–9	10–16	17–20
Adequacy of professional self-image	0–20	0–9	10–16	17–20
Productive copings	0–20	0–9	10–16	17–20
Satisfaction with the acquired level of professional self-regulation	0–20	0–9	10–16	17–20
Overall integrated score according to the methodology	0–150	0–70	71–122	123–150

Conclusions

To summarise, the developed express methodology "Determination of the servicemen's self-regulation peculiarities" has satisfactory psychometric indicators, is suitable for assessing the main features of servicemen's self-regulation, and is sensitive to the processes of formation of professional self-regulation of servicemen and their acquisition of combat traumatic experience. By its characteristics, the developed express methodology can be used for psychodiagnostics in centres for psychological recovery of servicemen participating in intensive combat operations as it makes it possible to clarify the prediction of the reaction to the acquired combat traumatic experience – the formation of post-traumatic stress disorder or post-traumatic growth, and to assess the actual ability to continue to perform combat tasks.

Potential areas for further research could be to clarify the psychometric characteristics of the developed rapid methodology for other selections of

military personnel, for example, for cadets of higher education institutions of the security and defence forces of Ukraine.

References

1. Kolesnichenko O. S., Matsehora Ya. V., Prykhodko I. I. (2017). *Osnovy psykholohichnoi pidhotovky viiskovosluzhbovtziv Natsionalnoi hvardii Ukrainy do vykonannia sluzhbovo-boiovoi diialnosti v ekstremalnykh umovakh* [Basics of psychological training of servicemen of the National Guard of Ukraine to perform service and combat activities in extreme conditions]. Kharkiv : NA NGU [in Ukrainian].
2. Kolesnichenko O. S., Prykhodko I. I., Matsehora Ya. V. (2021). *Psykholohichna rehabilitatsiia viiskovosluzhbovtziv pislia vykonannia sluzhbovo-boiovykh zavdan v boiovykh umovakh* [Psychological rehabilitation of servicemen after performing official combat tasks in combat conditions]. Kharkiv : NA NGU [in Ukrainian].

3. Prykhodko I. I., Matsehora Ya. V., Baida M. S. (2023). *Psykholohichne vidnovlennia ukrainykykh viiskovosluzhbovtziv pislia tryvaloï uchasti v boiovykh diïakh* [Psychological recovery of Ukrainian servicemen after prolonged participation in hostilities]. *Chest i zakon*, no. 4, pp. 121–131 [in Ukrainian].

4. Prykhodko I. I. (2022). *Pokazannia ta protypokazannia do provedennia psykholohichnoi reabilitatsii viiskovosluzhbovtziv pislia vykonannia zavdan v ekstremalnykh (boiovykh) umovakh* [Indications and contraindications for psychological rehabilitation of servicemen after performing tasks in extreme (combat) conditions]. *Problemy ekstremalnoi ta kryzovoi psykholohii*, vol. 4, no. 2, pp. 39–64. DOI: <https://doi.org/10.52363/dcpp-2022.2.4> [in Ukrainian].

5. Matsehora Ya. V., Baida M. S. (2023). *Psykometrychni vlastyivosti metodyky "Otsiniuvannia nehatyvnykh psykhychnykh reaktsii i staniv u viiskovosluzhbovtziv" ta dosvidyii vykorystannia u korotkostrokovomu psykholohichnomu vidnovlenni* [Psychometric properties of the technique "Assessment of negative mental reactions and conditions in military personnel" and experience of its use in short-term psychological recovery]. *Chest i zakon*, no. 1, pp. 114–124. DOI: <https://doi.org/10.33405/2078-7480/2023/1/84/276858> [in Ukrainian].

6. Matsehora Ya. V., Prykhodko I. I., Kolesnichenko O. S., Horielyshev S. A., Yurieva N. V., Baida M. S. (2020). *Avtomatyzatsiia profesiïnoho psykholohichnoho vidboru kandydativ na viiskovu sluzhbu v Natsionalnu hvardiiu Ukrainy* [Automation of professional psychological selection of candidates for military service in the National Guard of Ukraine]. Kharkiv : NA NGU [in Ukrainian].

7. Kolesnichenko O. S. (2018). *Metodyka otsinky travmatychnosti boiovoho dosvidu u viiskovosluzhbovtziv – uchasnykiv boiovykh diï* [Methodology for assessing the traumaticness of combat experience in military personnel

participating in combat operations]. *Ukrainskyi psykholohichnyi zhurnal*, vol. 9, no. 3, pp. 78–95 [in Ukrainian].

8. Prykhodko I. I. (2012). *Rozrobka psykhodiagnostychnoho instrumentariiu vyznachennia psykholohichnoi bezpeky osobystosti fakhivtsiv ekstremalnykh vydiv diïalnosti* [Development of a psychodiagnostic toolkit for determining the psychological safety of an individual of specialists in extreme types of activities]. *Naukovyi visnyk Lvivskoho derzhavnoho universytetu vnutrishnikh sprav. Serii: psykholohichna*. Lviv : LvDUVS, vol. 2, no. 1, pp. 312–322 [in Ukrainian].

9. Prykhodko I., Matsehora Ya., Kolesnichenko O., Baida M. (2017). *Ekspres-opytuvalnyk "Dezadaptyvnist": rozroblennia, aprobatyia, psykhometrychni pokaznyky* [Express questionnaire "Disadaptability": development, testing, psychometric indicators]. *Visnyk Natsionalnoi akademii Derzhavnoi prykordonnoi sluzhby Ukrainy. Serii: psykholohiia*. Khmelnytskyi : NA DPSU, vol. 3. Retrieved from: <http://surl.li/ujnz> (accessed 15 January 2024) [in Ukrainian].

10. Kolesnichenko O. S., Prykhodko I. I., Matsehora Ya. V., Yurieva N. V., Lyman A. A., Baida M. S. (2020). *Prykladna psykhodiagnostyka v Natsionalnii hvardii Ukrainy* [Applied psychodiagnosics in the National Guard of Ukraine]. Kharkiv : NA NGU [in Ukrainian].

11. Prykhodko I. I., Kolesnichenko O. S., Timchenko O. V., Matsehora Ya. V., Kravchenko O. V. (2016). *Psykholohiia ekstremalnoi diïalnosti* [Psychology of extreme activity]. Kharkiv : NA NGU [in Ukrainian].

12. Prykhodko I., Matsehora Y., Kolesnichenko O., Baida M., Vasylovskyy O. (2023). The psychological recovery program of Ukrainian military personnel after completing combat missions in the Russian-Ukrainian War. *Československá Psychologie*, vol. 67, no. 6, pp. 457–475. DOI: <https://doi.org/10.51561/cpsych.67.6.455> [in English].

The article was submitted to the editorial office on 31.03.2024

УДК 159.9:355/359 (477)

Я. В. Мацегора, І. І. Приходько, М. С. Байда

**ПСИХОМЕТРИЧНІ ВЛАСТИВОСТІ ЕКСПРЕС-МЕТОДИКИ
«ВИЗНАЧЕННЯ ОСОБЛИВОСТЕЙ САМОРЕГУЛЯЦІЇ ВІЙСЬКОВОСЛУЖБОВЦІВ»**

Одним із важливих показників оцінки ефективності програми відновлення військовослужбовцями, які беруть участь у інтенсивних бойових діях, є їх здатність до ефективної професійної саморегуляції. Проте на сьогодні є певний дефіцит психодіагностичного обладнання, яке б урахувало важливі особливості професійної саморегуляції військовослужбовців і мало б простий порядок проведення психодіагностичного обстеження.

У статті наведено дані авторських попередніх досліджень, які демонструють, що, крім урахування традиційних процесів (планування, моделювання, програмування та оцінки результатів), для загальної саморегуляції важливо визначити чинники, які забезпечують їх виконання у звичайних і бойових умовах професійної діяльності військовослужбовців. Відмічено командну роботу військовослужбовців як специфіку їх професійної саморегуляції.

Описано процедуру стандартизації експрес-методики «Визначення особливостей саморегуляції військовослужбовців». Визначено особливості професійної саморегуляції військовослужбовців, її відмінності і співвідношення із загальною саморегуляцією, наведено дані щодо професіоналізації саморегуляції у курсантів та її особливості в учасників бойових дій. Подано показники внутрішньої погодженості структури експрес-методики (альфа-Кронбаха та взаємкореляція), її валідності (кореляція зі шкалами методик визначення особливостей саморегуляції військовослужбовця та стиль саморегуляції поведінки), доведено доцільність її використання у центрах відновлення військовослужбовців – учасників інтенсивних бойових дій. Здійснено нормування методики для військовослужбовців, які проходять програму психологічного відновлення після участі у бойових діях.

***Ключові слова:** саморегуляція, професійна саморегуляція військовослужбовця, психологічне відновлення.*

Matsehora Yanina – Candidate of Psychological Sciences, Senior Researcher, Leading Researcher of the Scientific Research Center for Service-Combat Activities National Academy of the National Guard of Ukraine
<https://orsid.org/0000-0001-6103-1466>

Prykhodko Ihor – Doctor of Psychological Sciences, Professor, Deputy Head of the Scientific Research Center for Service-Combat Activities National Academy of the National Guard of Ukraine
<https://orcid.org/0000-0002-4484-9781>

Baida Maksym – PhD in State Security, Head of the Research Laboratory of the Scientific Research Center for Service-Combat Activities National Academy of the National Guard of Ukraine
<https://orcid.org/0000-0001-7658-4709>