

## МЕДИЧНА ПСИХОЛОГІЯ

УДК 159.9.072.42 : 159.97

DOI <https://doi.org/10.32689/2663-0672-2023-1-8>

### **Oleg KOKUN**

Doctor of Psychological Sciences, Professor, Deputy Director for Scientific and Innovative Work, G.S. Kostiuk Institute of Psychology of National Academy of Educational Sciences of Ukraine, 2 Pankivska str., Kyiv, Ukraine, 01033, [kokun@ukr.net](mailto:kokun@ukr.net)

### **Iryna PISCHKO**

Senior Researcher of the Research Department of Military Psychological Research, Research Centre of Humanitarian Problem of Armed Forces of Ukraine, Kyiv, Ukraine, [ensentium38@ukr.net](mailto:ensentium38@ukr.net)

### **Natalia LOZINSKA**

Leading Researcher of the Research Department of Military Psychological Research, Research Centre of Humanitarian Problem of Armed Forces of Ukraine, Kyiv, Ukraine, [nataloz@ukr.net](mailto:nataloz@ukr.net)

### **Олег КОКУН**

доктор психологічних наук, професор, заступник директора з науково-інноваційної роботи, Інститут психології імені Г.С. Костюка НАПН України, вул. Паньківська, 2, Київ, Україна, 01033, [kokun@ukr.net](mailto:kokun@ukr.net)

ORCID: <https://orcid.org/0000-0003-1793-8540>

### **Iryna PISHKO**

Старший науковий співробітник науково-дослідного відділу воєнно-психологічних досліджень, Науково-дослідний центр гуманітарних проблем Збройних Сил України, [ensentium38@ukr.net](mailto:ensentium38@ukr.net)

ORCID: <https://orcid.org/0000-0001-9246-2277>

### **Наталія ЛОЗІНСЬКА**

Провідний науковий співробітник науково-дослідного відділу воєнно-психологічних досліджень, Науково-дослідний центр гуманітарних проблем Збройних Сил України, [nataloz@ukr.net](mailto:nataloz@ukr.net)

ORCID: <https://orcid.org/0000-0002-8784-8279>

**Bibliographic description of the article:** Kokun O., Pishko I., Lozinska N. (2023). Formuvannia psykholohichnoi ta psykhofiziolohichnoi hotovnosti viiskovoslužbovtsiv do vykonannia zavdan za pryznachenniam pid chas boiovoho zalahodzhennia [Joint combat training development of military personnel's psychological and psycho-physiological readiness to perform assigned tasks]. *Suchasna medytsyna, farmatsiia ta psykholohichne zdorovia – Modern Medicine, Pharmacy and Psychological Health*, 1 (10), 64–71. DOI: <https://doi.org/10.32689/2663-0672-2023-1-8>

**Бібліографічний опис статті:** Кокун О., Пішко І., Лозінська Н. Формування психологічної та психофізіологічної готовності військовослужбовців до виконання завдань за призначенням під час бойового залагодження. *Сучасна медицина, фармація та психологічне здоров'я*. 2023. Вип. 1 (10), С. 64–71. DOI: <https://doi.org/10.32689/2663-0672-2023-1-8>

### JOINT COMBAT TRAINING DEVELOPMENT OF MILITARY PERSONNEL'S PSYCHOLOGICAL AND PSYCHO-PHYSIOLOGICAL READINESS TO PERFORM ASSIGNED TASKS

**Abstract. The research purpose** was to determine how successfully service members' psychological and psychophysiological readiness was formed at the Armed Forces of Ukraine during joint combat training with the aim to perform tasks in the UFO zone.

**Methodology.** The study was conducted in the first half of 2021. 149 service members of a separate mechanized brigade participated in it. We conducted two series of studies with an interval of 3 months and 10 days: 1) two weeks after the start of individual combat training at the place of permanent deployment; 2) after joint combat training. In both series of studies, the Ukrainian adaptations of six measures were used to examine indicators of both psychological and psychophysiological readiness.

**Scientific novelty.** For the first time, the specifics and degree of successful formation of service members' psychological and psychophysiological readiness to perform tasks as assigned during joint combat training at the Armed Forces of Ukraine was determined empirically.

**Conclusions.** The obtained research results showed that the studied service members of the Armed Forces of Ukraine had appropriate psychological and psychophysiological readiness to perform assigned tasks even before joint combat training. In addition, this readiness increased significantly during the training. This was evidenced by the following indicators: 1) all seven indicators of Multilevel Personal Questionnaire 'Adaptability-200' (increased tolerance to combat stress, improved behavioural regulation, communicative potential, morality and military-professional orientation, reduced signs of deviant behaviour and suicidal risk); 2) all eight indicators of military professional hardiness (its general level, military-professional commitment, control, challenge, emotional, motivational, social and professional components); 3) three scales of self-esteem that characterizes readiness to UFO participation (interest in UFO participation, willingness to perform UFO duties and confidence in one's abilities); 4) increased internal military-professional motivation; 5) significantly decreased PTSD symptoms.

The revealed high psychological and psychophysiological readiness of service members of the Armed Forces of Ukraine to perform assigned tasks, revealed in the performed research, acquired during the previous effective military professional training, became one of the most important components of the unexpectedly high combat capabilities of the Ukrainian army in repelling Russian armed aggression in 2022.

**Key words:** military personnel, psychological readiness, psychophysiological readiness, joint combat training.

## ФОРМУВАННЯ ПСИХОЛОГІЧНОЇ ТА ПСИХОФІЗІОЛОГІЧНОЇ ГОТОВНОСТІ ВІЙСЬКОВОСЛУЖБОВЦІВ ДО ВИКОНАННЯ ЗАВДАНЬ ЗА ПРИЗНАЧЕННЯМ ПІД ЧАС БОЙОВОГО ЗАЛАГОДЖЕННЯ

**Анотація. Мета.** Визначити ступінь успішності формування психологічної та психофізіологічної готовності військовослужбовців Збройних Сил України (ЗС України) до виконання завдань за призначенням під час бойового залагодження.

**Методологія.** Дослідження проводилося у першому півріччі 2021 р. В ньому взяли участь 149 військовослужбовців окремої механізованої бригади. Було проведено дві серії досліджень з інтервалом у 3 місяці і 10 днів: 1) через два тижні після початку індивідуальної бойової підготовки – в пункті постійної дислокації; 2) після завершення бойового залагодження. В обох серіях досліджень було використано україномовні адаптації шести психодіагностичних методик, за якими діагностувалися показники як психологічної, так і психофізіологічної готовності

**Наукова новизна.** Вперше емпіричним шляхом встановлено особливості та ступінь успішності формування психологічної та психофізіологічної готовності військовослужбовців ЗС України до виконання завдань за призначенням під час бойового залагодження.

**Висновки.** Встановлено, що для досліджуваних військовослужбовців був властивим належний рівень психологічної та психофізіологічної готовності до виконання завдань за призначенням ще до початку бойового залагодження. Однак, за час залагодження було зафіксоване подальше суттєве зростання рівня цієї готовності. Зокрема, достовірно поліпилися показники: 1) всіх семи шкал Багаторівневого особистісного опитувальника (БОО) «Адаптивність-200 (підвищення стійкості до бойового стресу, поведінкової регуляції, комунікативного потенціалу, моральної нормативності та військово-професійної спрямованості, зменшення вираженості ознак девіантних форм поведінки та суїцидального ризику); 2) всіх восьми шкал військово-професійної життєстійкості (її загального рівня, рівнів військово-професійних включеності, контролю, прийняття виклику, емоційного, мотиваційного, соціального та професійного компонентів); 3) трьох шкал самооцінки, що характеризують саме готовність до участі в ООС (зацікавленості в участі в ООС, бажання виконувати діяльність в ООС та впевненості у своїх силах); 4) внутрішньої військово-професійної мотивації; 5) рівня ПТСР, що істотно знизився.

Встановлений у дослідженні високий рівень психологічної та психофізіологічної готовності військовослужбовців ЗС України до виконання завдань за призначенням, здобутий під час попередньої ефективної військово-професійної підготовки, вважаємо, став однією з найважливіших складових високої боєздатності української армії при відбитті російської збройної агресії.

**Ключові слова:** військовослужбовці, психологічна готовність, психофізіологічна готовність, бойове залагодження.

**Problem statement.** The issue of forming the service members' psychological and psychophysiological readiness at the Armed Forces of Ukraine (the AF of Ukraine) is extremely significant, as not only combat effectiveness, but also service members' personal safety depends on it. The necessity to solve this problem has become even more urgent because of the armed aggression of the Russian Federation against Ukraine [1].

**Review of recent research and publications.** It is common knowledge that military service is one of the most stressful occupations [7; 23]. Military service is performed under stressful conditions such as acting in situations with lack of time and high uncertainty, as well as a high cost for mistakes [13]. Moreover, during deployment in a war zone

these stressful working conditions worsen additionally due to high danger and high responsibility for others' lives and health [12; 14; 17].

While participating in hostilities, military personnel are exposed to numerous combat stressors (being attacked or ambushed, seeing dead human bodies, knowing someone who was injured or killed, handling dead bodies etc.) and operational stressors (long deployments, separation from family, an uncertain redeployment date and lack of privacy) [15; 16]. Such stressful impact on service members can be redoubled by engagement in witnessing acts or the need to make instantaneous decisions that may violate their moral codes and personal values [18].

Performing official duties in difficult and extreme combat conditions often leads to maladaptation, decreased body resistance and neuropsychological overstrain in service members, leading to the development of negative mental states, such as posttraumatic stress disorder (PTSD), depression, anxiety, alcohol abuse and suicidality [5; 20; 22].

The experience of the Anti-Terrorist Operation and the United Forces Operation (the ATO/UFO) in the territory of Donetsk and Luhansk regions (even before the full-scale armed invasion of the Russian Federation to Ukraine) convincingly testified that results of combat missions performed by units of the Armed Forces of Ukraine depended, first of all, on military personnel's psychological and psychophysiological readiness. This readiness shall be ensured by professional selection, professional training for effective and safe acts and by direct execution of military-professional duties [3].

Psychological training of personnel means a holistic and organized process with the aim to form military personnel's mental stability and psychological readiness to act in combat, under difficult and dangerous conditions, in a rapidly changing environment, under prolonged neuropsychological stress to overcome difficulties related to military duties in peacetime and wartime [4].

The effective formation of personnel's psychological and psychophysiological readiness is especially important during joint combat training. Joint combat training of troops is one of the most important stages of military training that takes place in a short period of time with the aim to acquire the strong ability to perform combat tasks defined to certain unit in the framework of a wartime organizational and staff structure and, in some cases, in the framework of a peacetime organizational and staff structure. During joint combat training, namely, during company (battalion) tactical training, service members' individual training is improved, an algorithm of interactions between service members is worked out, combat skills are successfully renewed, service members receive new special knowledge, etc. [3].

**The research purpose.** By taking into account the above, the purpose of our study was to determine how successfully service members' psychological and psychophysiological readiness was formed at the Armed Forces of Ukraine during joint combat training with the aim to perform tasks in the UFO zone.

#### **Presentation of the main material**

#### **Research methods and organization**

#### **Participants and Procedure**

149 service members of a separate mechanized brigade participated in the research:

- 1) 127 (85.2%) were men, 22 (14.8%) were women;
- 2) their age was from 19 to 59 years ( $M = 35.1$ ,  $SD = 11.2$ );

3) their service terms under the contract were from 1 month to 27 years;

4) 143 (96%) had an experience of participation in anti-terrorist operation/security forces, 6 (4%) did not have such experience;

5) 106 (71.2%) were soldiers and senior soldiers, 27 (18.1%) were junior sergeants, sergeants and senior sergeants, 16 (10.7%) were warrant officers, senior warrant officers and warrant officers class 2.

In order to determine the changes occurred in service members as for various components of their psychological and psychophysiological readiness to perform assigned tasks during joint combat training, we conducted two series of studies with an interval of 3 months and 10 days: 1) two weeks after the start of individual combat training at the place of permanent deployment (end of January 2021); 2) before sending to the UFO area after joint combat training (the joint training included: practicing battles in the city with the use of infantry fighting vehicle, armoured personnel carriers and tanks) at the military training ground (beginning of June 2021).

The examination procedure was performed by authors. All questionnaires were completed in groups of 8–15 people with paper and pencil.

**Ethical Statement:** The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. The studies were conducted with the approval of the General Staff of the Armed Forces of Ukraine and participants' personal consent. Participants were informed that there were no right or wrong answers and were encouraged to respond candidly. Complete confidentiality was assured.

#### *Measures*

In both series, the Ukrainian adaptations of six measures were used to examine indicators of both psychological and psychophysiological readiness:

- Multilevel Personal Questionnaire 'Adaptability-200' [3];
- the General Self-Efficacy Scale [19]; the main question was modified to examine military-professional self-efficacy;
- the Scaled Self-Assessment of Psycho-Physiological State [10];
- the Zamfir's Motivation for Professional Activities Technique [21];
- The Short Screening Scale for DSM-IV PTSD [6];
- the Professional Hardiness Questionnaire [8]; the questions were modified to examine 'military professional hardiness'.

#### **Statistical Analysis**

Statistical Package for the Social Sciences version 22.0.0.0 was used for statistical analysis. Descriptive statistics (mean, standard deviation, skewness and

kurtosis) and paired sample t-test were used. We used a paired samples t-test because data distributions for all indicators were close to normal (modulo sum of skewness and kurtosis less than 1).

### Results

Table 1 presents the data obtained from Multilevel Personal Questionnaire 'Adaptability-200' at the beginning and at the end of the joint combat training. We should remind that the first 5 scales of this method are reversed – the higher the quantitative indicator is, the lower the severity of symptoms is, and vice versa.

As the above data show, all 7 indicators of the Multilevel Personal Questionnaire 'Adaptability-200' significantly improved during joint combat training ( $p < 0,001$ ): tolerance to combat stress increased, behavioural regulation improved, communicative potential increased, morality and military-professional orientation improved, signs of deviant behaviour and suicidal risk decreased.

The table 2 compares data from two series of studies for military-professional self-efficacy and motivation.

Table 1

**Comparison of Multilevel Personal Questionnaire 'Adaptability-200' at the beginning and at the end of the joint combat training**

#	Indicators	Series of studies				t	p <
		first		second			
		M	SD	M	SD		
1	Tolerance to combat stress	40,51	19,20	30,41	16,81	7,09	0,001
2	Behavioural regulation	19,54	13,63	12,88	10,81	7,19	0,001
3	Communicative potential	11,62	4,39	9,69	4,68	3,94	0,001
4	Morality	9,35	3,46	7,83	3,42	5,05	0,001
5	Military-professional orientation	5,66	4,16	3,95	3,02	5,59	0,001
6	Deviant behaviour	10,59	5,40	8,79	5,40	3,82	0,001
7	Suicidal risk	2,67	2,62	1,59	2,08	4,97	0,001

Table 2

**Comparison of military-professional self-efficacy, motivation, PTSD at the beginning and at the end of the joint combat training**

#	Indicators	Series of studies				t	p <
		first		second			
		M	SD	M	SD		
1	Military-professional self-efficacy	33,14	3,48	33,74	4,65	-,98	-
2	Internal motivation	3,65	0,87	3,92	0,85	-2,71	0,01
3	External positive motivation	3,18	0,64	3,13	0,79	,479	-
4	External negative motivation	3,09	1,25	3,13	1,09	-,28	-
8	PTSD	1,79	1,99	,87	1,57	4,90	0,001

The data show that during joint combat training, service members' military-professional self-efficacy increased slightly (however, not at a reliable level) and the indicators of external (positive and negative) motivation practically did not change. Visible changes were determined for internal military-professional motivation, the most favourable motivational indicator, that increased significantly ( $p < 0,01$ ), as well as for PTSD symptoms that decreased ( $p < 0,001$ ).

Next, the changes occurred according to the Scaled Self-Assessment of Psycho-Physiological State are give in Table 3.

The obtained results indicate that the military personnel's well-being and activity remained stable and they were sufficiently high even at the beginning of the joint combat training. Mood and capacity for work improved somewhat. The greatest growth was shown by self-assessment indicators characterizing the psychological readiness to participate in the UFO: interest in UFO participation ( $p < 0,05$ ), willingness to perform UFO duties ( $p < 0,01$ ) and confidence in one's abilities ( $p < 0,01$ ).

Table 4 compares data obtained with the Professional Hardiness Questionnaire.

The above results indicate that, just as in the case of the Multilevel Personal Questionnaire 'Adaptability-200',

Table 3

**Comparison of psycho-physiological states at the beginning  
and at the end of the joint combat training**

#	Indicators	Series of studies				t	p <
		first		second			
		M	SD	M	SD		
1	Well-being	78,28	21,32	78,15	20,85	,05	-
2	Activity	77,64	21,48	77,66	19,22	-,01	-
3	Mood	77,32	23,74	79,97	21,33	-1,06	-
4	Capacity for work	78,65	21,17	80,81	18,91	-,90	-
5	Interest in UFO participation	87,50	18,97	91,13	10,18	-1,98	0,05
6	Willingness to perform UFO duties	88,26	17,96	93,68	6,20	-2,64	0,01
7	Confidence in one's abilities	85,41	17,81	90,83	12,70	-3,11	0,01

Table 4

**Comparison of military professional hardiness  
at the beginning and at the end of the joint combat training**

#	Indicators	Series of studies				t	p <
		first		second			
		M	SD	M	SD		
1	General level of professional hardiness	59,13	11,06	66,16	9,35	-6,05	0,001
2	Professional commitment	17,77	4,64	20,68	4,10	-6,48	0,001
3	Professional control	20,10	3,92	22,10	3,08	-4,69	0,001
4	Professional challenge acceptance	21,16	4,23	23,38	4,05	-4,05	0,001
5	Emotional aspect	13,45	3,19	15,49	2,82	-5,58	0,001
6	Motivational aspect	15,61	3,43	17,40	2,74	-4,67	0,001
7	Social aspect	14,56	3,12	16,44	2,43	-5,62	0,001
8	Namely professional aspect	15,42	3,37	16,82	3,49	-3,81	0,001

all eight indicators of military professional hardiness improved significantly ( $p < 0.001$ ) during joint combat training. This can also be considered as an important sign of significantly improved psychological readiness of the respondents to participate in the UFO.

#### Discussion

Before analysing the changes appearing during joint combat training in military personnel's psychological and psychophysiological readiness, we should note that the studied sample, as a whole, had the appropriate level of such readiness even at the beginning of the training. In particular, the vast majority of service members were characterized by appropriate tolerance to combat stress, good behavioural regulation, communicative potential, morality, military-professional orientation, military-professional self-efficacy, internal military-professional motivation, self-assessment of one's own psychological state and readiness to UFO participation, as well as enough military professional hardiness.

This conclusion is based, among other things, on a comparison of the results obtained in the study of service members with experience of anti-terrorist operations conducted four years before. In particular,

we revealed that the service members examined in the current research showed significantly better results for all 14 indicators of the Multilevel Personal Questionnaire 'Adaptability-200' and the Scaled Self-Assessment of Psycho-Physiological State even at the beginning of joint combat training, compared to the sample of service members who participated in the research in 2017 [2].

Moreover, the compared results from the two research series revealed significant improvement of military personnel's psychological and psychophysiological readiness to perform assigned tasks after joint combat training. This, in particular, is evidenced by a significant ( $p < 0,05-0,001$ ) improvement of the following indicators: all seven indicators of the Multilevel Personal Questionnaire 'Adaptability-200', all eight indicators of military professional hardiness, three indicators of self-assessment that characterized the readiness to UFO participation, internal military-professional motivation, as well as a significant reduction of PTSD symptoms.

In addition, we should note that although military-professional self-efficacy did not increase significantly,

the main reason for this is the fact that its average level was quite high ( $M = 33,43$ ) initially; for example, the military personnel's data significantly exceeded the indicators of students [10] and general the adult population of Ukraine of various ages, both during the war and in the pre-war period [9]. Moreover, the most favourable motivational indicator [21] of the studied service members, namely internal military-professional motivation, was significantly higher ( $t = 5,21; p < 0,001$ ) than indicators of external (positive and negative) motivation (table 2). According to the Professional Hardiness Questionnaire, the favourable signs indicating the readiness, in general, of the studied sample to participate in the UFO included higher military-professional acceptance of the challenge, military-social and military-professional components in service members compared to the other examined components.

Also, we can assert that the sufficiently better psychological and psychophysiological readiness of service members of the Armed Forces of Ukraine to perform assigned tasks, revealed in the performed research and acquired during the previous effective military professional training, became one of the most important components of the unexpectedly high combat capabilities of the Ukrainian army in repelling Russian armed aggression in 2022.

#### Conclusion and prospects for further research

The obtained research results showed that the studied service members of the Armed Forces of Ukraine had appropriate psychological and psychophysiological readiness to perform assigned tasks even before joint combat training. In addition, this readiness increased significantly during the training. This, in particular, is evidenced by a significant improvement of the following indicators:

1) all seven indicators of Multilevel Personal Questionnaire 'Adaptability-200' (increased tolerance to combat stress, improved behavioural regulation, communicative potential, morality and military-professional orientation, reduced signs of deviant behaviour and suicidal risk);

2) all eight indicators of military professional hardiness (its general level, military-professional commitment, control, challenge, emotional, motivational, social and professional components);

3) three scales of self-esteem that characterizes readiness to UFO participation (interest in UFO participation, willingness to perform UFO duties and confidence in one's abilities);

4) internal military-professional motivation;

5) a significantly decreased PTSD symptoms.

The revealed high psychological and psychophysiological readiness of service members of the Armed Forces of Ukraine to perform assigned tasks, revealed in the performed research and acquired during the previous effective military professional training, became one of the most important components of the unexpectedly high combat capabilities of the Ukrainian army in repelling Russian armed aggression in 2022.

It is natural that some representatives in the researched sample of service members were characterized by a relatively poor readiness to perform assigned tasks (as a whole, or according to some indicators). Of course, such service members need increased attention from commanders and military psychologists in order to provide them with separate targeted professional and service-professional assistance to improve their readiness to perform combat tasks. So that, the article authors see *prospects for their further research* in the development of scientific and practical foundations of such assistance.

#### Bibliography:

1. Кириченко, А.В. (2022). Модель психологічної готовності військовослужбовця Десантно-штурмових військ до діяльності в бойових умовах. *Науковий журнал "Табітус"*, 38. 59–63. <https://doi.org/10.32843/2663-5208>
2. Коқун О.М., & Пішко І.О. (2019). Особливості динаміки психофізіологічного стану військовослужбовців впродовж шести місяців виконання завдань в районі АТО. *Психологічне здоров'я*, 1(2). 132–152. <https://doi.org/10.32689/2663-0672-2019-1-2-132-152>
3. Коқун О.М., Мороз В.М., Пішко І.О., & Лозінська Н.С. (2021). *Формування психологічної готовності військовослужбовців військової служби за контрактом до виконання завдань за призначенням під час бойового злагодження*: Методичний посібник. Київ: 7БЦ. 170 с.
4. *Про затвердження Інструкції з організації психологічної підготовки у Збройних Силах України*: наказ Головнокомандувача Збройних Сил України від 23.10.2020 р. №173.
5. Bergman, D., Gustafsson-Sendén, M., & Berntson, E. (2021). From believing to doing: the association between leadership self-efficacy and the developmental leadership model. *Frontiers in Psychology*, 12, 669905. <https://doi.org/10.3389/fpsyg.2021.669905>
6. Breslau, N., Peterson, E. L., Kessler, R. C., & Schultz, L. R. (1999). Short screening scale for DSM-IV posttraumatic stress disorder. *American Journal of Psychiatry*, 156(6), 908–911. <https://doi.org/10.1176/ajp.156.6.908>
7. Goodwin, L., Wessely, S., Hotopf, M., Jones, M., Greenberg, N., Rona, R., . . . Fear, N. (2015). Are common mental disorders more prevalent in the UK serving military compared to the general working population? *Psychological Medicine*, 45(9), 1881–1891. <https://doi.org/10.1017/S0033291714002980>
8. Kokun, O. (2021). Testing in mental health research: Professional hardiness questionnaire (English-language version). *Wiadomości Lekarskie*, 74(11, 1), 2799–2805. <https://doi.org/10.36740/WLek.202111121>

9. Kokun, O. (2022). The Ukrainian population's war losses and their psychological and physical health. *Journal of Loss and Trauma*. <https://doi.org/10.1080/15325024.2022.2136612>
10. Kokun, O., Korobeynikov, G., Mytskan, B., Cynarski, W. J., & Korobeynikova, L. (2019). Applied aspects of improving pupils' and students' adaptive capacity. Ido Movement for Culture. *Journal of Martial Arts Anthropology*, 19(3), 38–45. <https://doi.org/10.14589/ido.19.3.5>
11. Kokun, O., Maksymenko, S., Korobeynikov, G., Cynarski, W.J., Korobeynikova, L., Serdiuk, L., Adyrkhaiev, S., Adyrkhaieva, L., Nikonorov, D., & Smoliar, I. (2021). Features of the components of students' psychophysiological readiness to work as teachers. *Ido Movement for Culture. Journal of Martial Arts Anthropology*, 21(2), 11–18. <https://doi.org/10.14589/ido.21.2.3>
12. Kokun, O., Pischko, I., & Lozinska, N. (2022). Examination of military personnel's changed psychological states during long-term deployment in a war zone. *Anales de Psicología*, 38(1), 191–200. <https://doi.org/10.6018/analesps.475041>
13. Lo Bue, S. (2015). *Hardiness in the heart of the military* [Doctoral dissertation, University of Leuven and the Royal Military Academy]. <https://core.ac.uk/reader/34622593>
14. Muse, A., Lamson, A., & Cobb, E. (2019). The effects of spirituality, physical health, and social support on deployment stress and mental health outcomes. *Military Behavioral Health*, 7(1), 92–99. <https://doi.org/10.1080/21635781.2018.1490226>
15. Nassif, T., Start, A. R., Toblin, R. L., & Adler, A. (2019). Self-reported mindfulness and soldier health following a combat deployment. *Psychological Trauma: Theory, Research, Practice, and Policy*, 11(4), 466–474. <https://doi.org/10.1037/tra0000413>
16. Osório, C., Jones, N., Jones, E., Robbins, I., Wessely, S., & Greenberg, N. (2018). Combat experiences and their relationship to post-traumatic stress disorder symptom clusters in UK military personnel deployed to Afghanistan. *Behavioral Medicine*, 44(2), 131–140. <https://doi.org/10.1080/08964289.2017.1288606>
17. Paige, L., Renshaw, K. D., Allen, E. S., & Litz B. T. (2019). Deployment trauma and seeking treatment for PTSD in US soldiers. *Military Psychology*, 31(1), 26–34. <https://doi.org/10.1080/08995605.2018.1525219>
18. Richardson, N. M., Lamson, A. L., Smith, M., Eagan, S. M., Zvonkovic, A. M., & Jensen, J. (2020). Defining moral injury among military populations: A systematic review. *Journal of Traumatic Stress*, 33(4), 575–586. <https://doi.org/10.1002/jts.22553>
19. Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-Nelson.
20. Sipos, M. L., Bar-Haim, Y., Abend, R., Adler, A. B., & Bliese, P. D. (2014). Postdeployment threat-related attention bias interacts with combat exposure to account for PTSD and anxiety symptoms in soldiers. *Depression & Anxiety*, 31(2), 124–129. <https://doi.org/10.1002/da.22157>
21. Tsarapkina, J. M., Anisimova, A. V., Gadzhimetova, B. D., Kireycheva, A. M., & Mironov, A. G. (2021). *The impact of digital education transformation on technical college teachers*. *Journal of Physics: Conference Series*, 2001. <https://doi.org/10.1088/1742-6596/2001/1/012030>
22. Williams, C. L., & Berenbaum, H. (2019). Acts of omission, altered worldviews, and psychological problems among military veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 11(4), 391–395. <https://doi.org/10.1037/tra0000394>
23. Wilson, M. A., Semeniuk, R. C., & Brown K. N. (2021). Deployment stressors in united states air force nurses associated with the experience of moral distress. *Military Behavioral Health*, 9(3), 275–288. <https://doi.org/10.1080/21635781.2020.1864529>

#### References:

1. Kyrychenko, A.V. (2022). Model' psykholohichnoyi hotovnosti viys'kovosluzhbovtysya Desantno-shturmovykh viys'k do diyal'nosti v boyovykh umovakh [A model of the psychological readiness of a soldier of the Airborne Assault Forces to operate in combat conditions]. *Naukovyy zhurnal "Habitus"*, 38. 59–63. <https://doi.org/10.32843/2663-5208>
2. Kokun O.M., & Pishko I.O. (2019). Osoblyvosti dynamiky psykhoфизиологичного стану viys'kovosluzhbovtisv protyahom shesty misyatsiv vykonannya zavdan' v rayoni ATO [Peculiarities of the dynamics of the psychophysiological state of servicemen during six months of performing tasks in the ATO area]. *Psykholohichne zdorov'ya*, 1(2). 132–152. <https://doi.org/10.32689/2663-0672-2019-1-2-132-152>
3. Kokun O.M., Moroz V.M., Pishko I.O., Lozins'ka N.S. (2021). *Formuvannya psykholohichnoyi hotovnosti viys'kovosluzhbovtisv viys'kovoyi sluzhby za kontraktom do vykonannya zavdan' za pryznachennyam pid chas boyovoho zlahodzhennya* [Formation of psychological readiness of military servicemen under contract to perform assigned tasks during combat coordination] : Metodichnyy posibnyk. Kyiv: 7BTS.
4. *Pro zatverdzhennya Instruktsiyi z orhanizatsiyi psykholohichnoyi pidhotovky u Zbroynykh Sylakh Ukrainy* [On the approval of the Instructions for the organization of psychological training in the Armed Forces of Ukraine] : nakaz Holovnokomanduvacha Zbroynykh Syl Ukrainy vid 23.10.2020 r. №173.
5. Bergman, D., Gustafsson-Sendén, M., & Berntson, E. (2021). From believing to doing: the association between leadership self-efficacy and the developmental leadership model. *Frontiers in Psychology*, 12, 669905. <https://doi.org/10.3389/fpsyg.2021.669905>
6. Breslau, N., Peterson, E. L., Kessler, R. C., & Schultz, L. R. (1999). Short screening scale for DSM-IV posttraumatic stress disorder. *American Journal of Psychiatry*, 156(6), 908–911. <https://doi.org/10.1176/ajp.156.6.908>
7. Goodwin, L., Wessely, S., Hotopf, M., Jones, M., Greenberg, N., Rona, R., . . . Fear, N. (2015). Are common mental disorders more prevalent in the UK serving military compared to the general working population? *Psychological Medicine*, 45(9), 1881–1891. <https://doi.org/10.1017/S0033291714002980>

8. Kokun, O. (2021). Testing in mental health research: Professional hardiness questionnaire (English-language version). *Wiadomości Lekarskie*, 74(11, 1), 2799–2805. <https://doi.org/10.36740/WLek202111121>
9. Kokun, O. (2022). The Ukrainian population's war losses and their psychological and physical health. *Journal of Loss and Trauma*. <https://doi.org/10.1080/15325024.2022.2136612>
10. Kokun, O., Korobeynikov, G., Mytskan, B., Cynarski, W. J., & Korobeynikova, L. (2019). Applied aspects of improving pupils' and students' adaptive capacity. Ido Movement for Culture. *Journal of Martial Arts Anthropology*, 19(3), 38–45. <https://doi.org/10.14589/ido.19.3.5>
11. Kokun, O., Maksymenko, S., Korobeynikov, G., Cynarski, W. J., Korobeynikova, L., Serdiuk, L., Adyrkhaiev, S., Adyrkhaieva, L., Nikonorov, D., & Smoliar, I. (2021). Features of the components of students' psychophysiological readiness to work as teachers. *Ido Movement for Culture. Journal of Martial Arts Anthropology*, 21(2), 11–18. <https://doi.org/10.14589/ido.21.2.3>
12. Kokun, O., Pischko, I., & Lozinska, N. (2022). Examination of military personnel's changed psychological states during long-term deployment in a war zone. *Anales de Psicología*, 38(1), 191–200. <https://doi.org/10.6018/analesps.475041>
13. Lo Bue, S. (2015). *Hardiness in the heart of the military* [Doctoral dissertation, University of Leuven and the Royal Military Academy]. <https://core.ac.uk/reader/34622593>
14. Muse, A., Lamson, A., & Cobb, E. (2019). The effects of spirituality, physical health, and social support on deployment stress and mental health outcomes. *Military Behavioral Health*, 7(1), 92–99. <https://doi.org/10.1080/21635781.2018.1490226>
15. Nassif, T., Start, A. R., Toblin, R. L., & Adler, A. (2019). Self-reported mindfulness and soldier health following a combat deployment. *Psychological Trauma: Theory, Research, Practice, and Policy*, 11(4), 466–474. <https://doi.org/10.1037/tra0000413>
16. Osório, C., Jones, N., Jones, E., Robbins, I., Wessely, S., & Greenberg, N. (2018). Combat experiences and their relationship to post-traumatic stress disorder symptom clusters in UK military personnel deployed to Afghanistan. *Behavioral Medicine*, 44(2), 131–140. <https://doi.org/10.1080/08964289.2017.1288606>
17. Paige, L., Renshaw, K. D., Allen, E. S., & Litz B. T. (2019). Deployment trauma and seeking treatment for PTSD in US soldiers. *Military Psychology*, 31(1), 26–34. <https://doi.org/10.1080/08995605.2018.1525219>
18. Richardson, N. M., Lamson, A. L., Smith, M., Eagan, S. M., Zvonkovic, A. M., & Jensen, J. (2020). Defining moral injury among military populations: A systematic review. *Journal of Traumatic Stress*, 33(4), 575–586. <https://doi.org/10.1002/jts.22553>
19. Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-Nelson.
20. Sipos, M. L., Bar-Haim, Y., Abend, R., Adler, A. B., & Bliese, P. D. (2014). Postdeployment threat-related attention bias interacts with combat exposure to account for PTSD and anxiety symptoms in soldiers. *Depression & Anxiety*, 31(2), 124–129. <https://doi.org/10.1002/da.22157>
21. Tsarapkina, J. M., Anisimova, A. V., Gadzhimetova, B. D., Kireycheva, A. M., & Mironov, A. G. (2021). *The impact of digital education transformation on technical college teachers*. *Journal of Physics: Conference Series*, 2001. <https://doi.org/10.1088/1742-6596/2001/1/012030>
22. Williams, C. L., & Berenbaum, H. (2019). Acts of omission, altered worldviews, and psychological problems among military veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 11(4), 391–395. <https://doi.org/10.1037/tra0000394>
23. Wilson, M. A., Semeniuk, R. C., & Brown K. N. (2021). Deployment stressors in united states air force nurses associated with the experience of moral distress. *Military Behavioral Health*, 9(3), 275–288. <https://doi.org/10.1080/21635781.2020.1864529>