

Formation of Physical Readiness of Cadets for Professional Activity under the Conditions of Quarantine

Oleksandr Mozolev^{1,*}, Andriy Chudyk², Valentina Miroshnichenko³, Klavdiia Tushko³,
Valentyna Kupchyshyna³, Anton Datskov⁴, Artur Gorbenko⁵

¹Department of Theory and Methodology of Physical Culture and Valeology, Khmelnytskyi Humanitarian-Pedagogical Academy, Ukraine

²Department of Physical Training and Personal Safety, National Academy of the State Border Guard Service of Ukraine named after Bogdan Khmelnytskyi, Ukraine

³Department of Psychology, Pedagogy and Socio-Economic Disciplines, Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine, Khmelnytskyi, Ukraine

⁴Department of Military Arts, National Academy of the State Border Guard Service of Ukraine named after Bogdan Khmelnytskyi, Ukraine

⁵Department of Tactics and Special Discipline, Hetman Petro Sahaidachny National Army Academy of Ukraine, Ukraine

Received May 24, 2021; Revised August 5, 2021; Accepted August 27, 2021

Cite This Paper in the following Citation Styles

(a): [1] Oleksandr Mozolev, Andriy Chudyk, Valentina Miroshnichenko, Klavdiia Tushko, Valentyna Kupchyshyna, Anton Datskov, Artur Gorbenko, "Formation of Physical Readiness of Cadets for Professional Activity under the Conditions of Quarantine," *International Journal of Human Movement and Sports Sciences*, Vol. 9, No. 5, pp. 973 - 980, 2021. DOI: 10.13189/saj.2021.090519.

(b): Oleksandr Mozolev, Andriy Chudyk, Valentina Miroshnichenko, Klavdiia Tushko, Valentyna Kupchyshyna, Anton Datskov, Artur Gorbenko (2021). *Formation of Physical Readiness of Cadets for Professional Activity under the Conditions of Quarantine. International Journal of Human Movement and Sports Sciences*, 9(5), 973 - 980. DOI: 10.13189/saj.2021.090519.

Copyright©2021 by authors, all rights reserved. Authors agree that this article remains permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

Abstract The article analyzes the results of the formation of physical readiness of cadets aged 18-21 of the National Academy of the State Border Guard Service of Ukraine for professional activity under the conditions of quarantine. The study involved 168 cadets of 2-4 years of study. The aim is to investigate the influence of motivational and value orientations of cadets on the results of conducting independent classes on the formation of physical readiness for professional activity under the conditions of quarantine restrictions. It is established that in the process of physical self-improvement, the conscious attitude of cadets to their own physical development, state of health, acquisition of professionally significant skills and abilities is formed. It is established that quarantine restrictions of motor activity negatively affect the growth of indicators of physical readiness of cadets to perform professional tasks. Purposeful independent physical exercises can be the alternative to traditional classes.

Independent physical training of cadets during quarantine restrictions allows keeping physical qualities at professionally necessary level.

Keywords Motor Activity, Physical Readiness, Professional Activity, Quarantine Restrictions, Independent Classes, Cadets

1. Introduction

Professional activity of the future officer requires high level of development of physical qualities, professional physical skills and abilities. One of the most important tasks of physical education in a higher military educational institution is the formation of the physical readiness of the future officer to perform professional

tasks [1]. Physical readiness of the future officers for professional activity is an integrative-personal property of the cadet, which is characterized by the degree of conformity of the content and the state of mind, physical health, development of physical qualities, self-awareness, belief in personally significant activity [2]. The content of the concept of readiness for physical self-improvement of cadets is a process of changing the properties and qualities of physical readiness, which determines the internal readiness, conscious attitude to physical culture and sports activities and is characterized by the high level of cognitive, motivational, moral, and volitional processes of the personality [1, 3].

There are two interdependent aspects of the type of physical readiness: pre-readiness as a person's preparedness for the activity, which has a system of rather stable, static components, mental formations - knowledge, skills, abilities, meanings and values of the personality, attitudes, preferences, etc., direct readiness as a state appropriate mobilization, functional orientation of the cadet's psyche to solve specific tasks in appropriate circumstances and conditions. This aspect of physical readiness is characterized by high dynamism, mobility and dependence on situational circumstances, the state of mental and physical health of the cadet, moral and psychological atmosphere in the team, social environment, etc. [4, 5].

Human consciousness directly affects the level of personal assimilation of the values of physical education. Solving the problems of physical development and formation of readiness for physical self-improvement directly depends on taking into account the personal psychological and pedagogical characteristics of cadets [6, 7, 8]. Awareness of the cadet's need for physical culture and sports, acquisition of the necessary knowledge, skills and abilities forms the goal that involves the choice of methods and means by which the cadet manages the process of his or her physical self-improvement [9]. Physical self-improvement of cadets is understood as purposeful pedagogical process of conscious work on oneself for the purpose of comprehensive physical development, formation of value orientations, achievement of personally significant results of development of physical qualities [3, 10]. Characteristic feature of the physical self-improvement of cadets is the connection with daily professional activities, taking into account the limitations of the military institution [11].

The objective is to investigate the influence of motivational and value orientations of cadets on the results of conducting independent classes on the formation of physical readiness for professional activity under the conditions of quarantine restrictions.

The tasks are:

- to establish the system of value orientations that influences the motivation of cadets to independent physical exercises in order to form readiness for professional activity;

- to determine the priority areas of physical self-improvement of cadets under the conditions of quarantine restrictions;
- to investigate the impact of independent physical exercises and the level of physical development of cadets;
- to carry out the comparative analysis of physical readiness of cadets under standard conditions of training and under the conditions of quarantine restrictions.

2. Materials and Methods

The Participants of the Experiment

168 cadets aged 18-21, who studied in the 2nd-4th year at the National Academy of the State Border Guard Service of Ukraine.

Methods

To obtain the necessary information, we used general scientific methods of the theoretical level of research, namely: analysis of scientific and educational sources; poll; questionnaire, pedagogical experiment, pedagogical observation; diagnosis, testing, comparative analysis; methods of mathematical statistics.

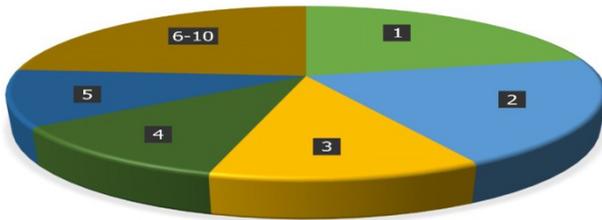
The analysis of scientific and methodological sources was used to study the views of the scientists on the problem of developing physical qualities of cadets under the conditions of military education institution. Surveys and questionnaires of cadets were conducted to determine the system of value orientations that influence the motivation of cadets to independent physical exercises, establishment of personally significant priority types of physical self-improvement of cadets under the conditions of quarantine restrictions [12]. The pedagogical experiment was conducted to test the effectiveness of the impact of independent physical exercises and the level of physical development of cadets. Pedagogical observation and testing were conducted to establish the results of physical development of cadets. Methods of mathematical statistics were used to analyze the results of the pedagogical experiment and conduct a comparative analysis of the physical readiness of cadets under standard training conditions and under the conditions of quarantine restrictions.

Organization of the research: The research was conducted on the basis of the National Academy of the State Border Guard Service of Ukraine from September to December 2020. Researched: 168 cadets aged 18-21, who studied in the 2nd-4th year. It should be noted that the first-year cadets did not join our study for the following reasons:

- in the first year of study there is a process of adaptation of cadets to new conditions of training and daily professional activity;
- training in the first year of study of physical education is aimed at general physical development, so the cadets have no clear professional orientation;
- first-year cadets, for objective reasons, cannot assess the difference in learning under normal conditions and in the context of restrictions caused by the COVID-19 pandemic.

3. Results

Scientific researches determine that in the value orientations of the personality the target and motivational orientation of the cadets is combined [13, 14, 15]. Establishment of value orientations of cadets which form their motivation to independent physical exercises during the pandemic provided the choice from 12 offered motives of two most significant in their opinion. The questionnaire was conducted anonymously. The results of the questionnaire are presented in (Fig. 1)



Where:

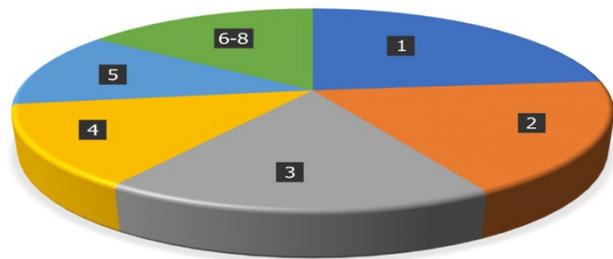
1. Harmonious development of basic physical qualities - 24.2%;
2. Improvement of professionally necessary skills and abilities - 22.7%;
3. Confidence in oneself and one's physical abilities - 13.9%;
4. Personal sports achievements - 12.6%;
5. Need to comply with standards and pass tests - 11.8%;
6. External attractiveness - 6.3%;
7. Improving health - 4.7%;
8. Search for new impressions and opportunities - 1.9%;
9. Temporary forced physical activity - 1.3%;
10. Entertainment, leisure time - 0.6%.

Figure 1. Distribution of value orientations of cadets in relation to independent physical exercises during the pandemic

The analysis of the questionnaire showed significant differences in the answers of cadets of the second and the fourth year of study. The most significant difference in the value orientations of cadets was noted in the establishment of such priorities of their physical culture and sports activities as: improvement of professionally necessary skills for the cadets of the 4th year of study was in first place (28.3%) while for the cadets of 2nd year of study only in the fifth place (11.3%); self-confidence and confidence in own physical abilities for the cadets of the 2nd year of study were in the first place (26.4%) while for the cadets of the 4th year of study only in the third place (13.2%); personal sports achievements for the cadets of

the 2nd year of study were in second place (17.0%) while for the cadets of the 4th year of study only in the fifth place (9.4%). This fact indicates change in the priorities of physical culture and sports activities of cadets in the learning process from personality-oriented to professionally significant. The general results of the cadets' questionnaire showed that the most important value priorities of cadets for independent physical exercises during the pandemic are: harmonious development of basic physical qualities - 24.2% and improvement of professionally necessary skills - 22.7%.

The study of priority areas of physical self-improvement of cadets under the conditions of quarantine restrictions gave the following results (Fig. 2).



Where:

1. Strength training in the gym - 23.5%;
2. Independent training with different types of fitness in specialized gyms - 18.3%;
3. Individual training in the dormitory - 17.8%;
4. Independent physical training in the fresh air - 13.2%;
5. Lack of the clear system in conducting independent training - 12.1%;
6. Hiking - 6.1%;
7. Only morning physical exercise - 5.4%;
8. Only accompanying physical training within the agenda - 3.6%.

Figure 2. Distribution of priority areas of physical self-improvement of cadets under the conditions of quarantine restrictions

The analysis of cadets' answers in determining the priority areas of physical self-improvement under the conditions of quarantine restrictions showed insignificant deviations in the answers of cadets of the 2nd, the 3rd and the 4th years of study. 84.9% of the respondents (1-5 priority) acknowledged the need for purposeful physical self-improvement under the conditions of quarantine. 72.8% of the respondents have a clear program of physical self-improvement. The main priority type of independent classes for cadets is classes in specialized gyms - 41.8%; independent physical training in the fresh air is a priority for - 13.2% of the cadets; lack of any clear system in conducting independent training was noted by 12.1% of the cadets; lack of desire for independent physical exercises was noted in - 15.1% of the cadets.

The system of tests, which allowed assessing the level of development of physical qualities of cadets, included the study of the following motor abilities:

1. Speed - running for 100 m.;
2. Force - chinup;
3. Endurance - running for 3000 m.;

4. Dexterity - shuttle running 10x10 m.;
5. Coordination skills - a set of techniques of hand-to-hand combat.

The study of the influence of independent physical exercises on the level of physical development of cadets during quarantine restrictions gave the following results (Table 1).

The analysis of the results of the influence of independent physical exercises on the level of physical development of cadets under the conditions of quarantine restrictions showed that in general the cadets managed to keep their physical conditions at the required professional level. The experiment for four months showed that the indicators of the development of speed (100 m run), dexterity (shuttle run 10x10 m) and the development of coordination skills of the studied cadets did not change significantly. This fact indicates that independent physical training of cadets during quarantine restrictions allows preserving these physical qualities at the level of pre-quarantine indicators. The most significant indicator of the deterioration of the physical condition of the cadets was the indicator of endurance development (running for 3000 m). During the study, the results of the 3000 m run deteriorated by the average of 2.8-4.2% (21-32 seconds) ($p < 0.01$). At the same time, the cadets' results in strength development improved. The average increase in performance of the exercise of chinup was 3.5-7.2% ($p < 0.001$). This fact indicates that during the quarantine restrictions there was a reorientation in the system of development of physical qualities of cadets, associated primarily with the objective difficulties of endurance development in this period.

The study of changes of physical readiness of cadets under the standard conditions of training and under the conditions of quarantine restrictions taking into account personal priority directions of physical self-improvement are presented in Table 2.

Comparative analysis of the physical readiness of cadets under the standard training conditions and under the conditions of quarantine restrictions showed the following tendencies:

- in all experimental groups, there was a decrease in endurance indices; in group No. 5, it was the largest - 0.43 ± 0.27 ($p < 0.001$); in group No. 4, it was the smallest - 0.14 ± 0.09 ($p < 0.01$), which indicates that the development of endurance occurs better during independent classes in the fresh air than under other conditions of individual training indoors;
- the increase of the index in strength development was better in cadets of group No. 1 + 2.3 ± 0.6 ($p < 0.001$); in group No. 5, it was negative - 0.8 ± 0.4 ($p < 0.05$), which indicates the possibility of improving the indices of physical development of the cadets during quarantine restrictions under the conditions of purposeful systematic independent physical training;
- the most popular among the cadets were independent strength training in the gym (group No. 1) and various types of fitness (group No. 2). Classes in these groups helped to maintain the physical shape of cadets during quarantine restrictions in most physical exercises: speed development + 0.17 ± 0.21 ($p < 0.05$); force development + 1.7 ± 0.4 ($p < 0.001$); the development of dexterity and coordination skills remained without significant changes;
- the lowest growth rates in the development of physical qualities were observed in the control group No. 5 and were lost faster during quarantine restrictions, as evidenced by the experimental group No. 5. This fact indicates low motivational component in the system of value orientations of cadets of this group, which does not allow them to self-realize during independent physical exercises, which ultimately affects the formation of physical readiness for professional activity.

Table 1. The results of the influence of independent physical exercises on the level of physical development of cadets during quarantine restrictions

№ o/n	Name of the exercise	Primary stage of the research			Final stage of the research		
		2 st year of study n=56	3 rd year of study n=56	4 th year of study n=56	2 st year of study n=56	3 rd year of study n=56	4 th year of study n=56
		X± m					
1.	Running for 100 m. (s.)	14.06± 0.31	13.92± 0.26	13.85± 0.23m	14.15± 0.28	13.97± 0.27	13.82± 0.25
2	Chinup (times)	14.1± 1.8	14.8± 2.1	15,2± 2.4	14.6± 1.9	15.5± 2.3	16.3± 2.7
3	Running for 3000 m (min.)	12.42± 0.35	12.30± 0.32	12.22± 0.27	13.14± 0.43	12.56± 0.38	12.43± 0.36
4	Shuttle running 10x10 m. (s.)	26.42± 0.93	26.14± 0.75	25.83± 0.64	26.38± 0.87	26.18± 0.84	25.80± 0.77
5	A set of techniques of hand-to-hand combat	4,05± 0.45	4,15± 0.36	4,20± 0.35	4,08± 0.43	4,18± 0.32	4,25± 0.35

Table 2. The results of changes of physical readiness of cadets under the standard training conditions and under the conditions of quarantine restrictions

exercises	Running for 100m. Changes		Chinups Changes		Running for 3000m Changes		Shuttle running 10x10m Changes		A set of techniques of hand-to-hand combat Changes	
	A	B	A	B	A	B	A	B	A	B
Group 1	+0.42±0.24	+0.15±0.25	+1.4±0.4	+2.3±0.6	+0.22±0.15	-0.36±0.24	+0.25±0.15	-0.17±0.13	+0.4±0.2	-0.3±0.2
Group 2	+0.45±0.17	+0.20±0.15	+1.2±0.3	+1.1±0.4	+0.30±0.17	-0.26±0.14	+0.34±0.18	-0.14±0.08	+0.5±0.2	-0.2±0.1
Group 3	+0.35±0.22	+0.12±0.24	+1.4±0.2	+1.2±0.2	+0.18±0.10	-0.28±0.17	+0.18±0.14	-0.24±0.16	+0.3±0.1	-0.3±0.2
Group 4	+0.45±0.15	+0.26±0.20	+1.1±0.3	+1.2±0.4	+0.38±0.23	-0.14±0.09	+0.32±0.22	-0.12±0.08	+0.4±0.2	-0.2±0.1
Group 5	+0.27±0.22	-0.18±0.25	+0.6±0.2	-0.8±0.4	+0.13±0.07	-0.43±0.27	+0.18±0.12	-0.43±0.12	+0.2±0.1	-0.4±0.3

Where:

A – Control group; B – Experimental group;

Group 1 – cadets who preferred strength training in the gym;

Group 2 – cadets who preferred training in different types of fitness;

Group 3 – cadets who preferred independent training in the dormitory;

Group 4 – cadets who preferred independent training in the fresh air;

Group 5 – cadets who do not have a clear system for conducting independent training;

“+” - improvement of indicators;

“-” - deterioration of indicators

4. Discussion

Physical readiness by definition is an integrative personal property of the cadet, characterized by the presence of the system of knowledge and skills, self-awareness, belief in the personal significance of self-improvement [16]. The researchers consider the study of the problem of physical readiness and definition of value of physical self-improvement during complex preparation of cadets for performance of professional tasks in the plane:

- study of the problems of motivation of cadets to physical self-improvement, necessity of doing physical exercises and the organization of individual training [2, 7, 17, 18];
- conducting physical education classes and organizing the system of independent classes taking into account the limitations of COVID-19 [12, 19, 20];
- study of the impact of modern fitness technologies on indicators of motor activity and physical readiness of students [21, 22];
- study of indicators of the level of physical fitness of cadets depending on the level of their motor activity at different stages of training [23, 24, 25];
- training of modern specialists in the sphere of physical education and sports, capable of making changes in accordance with the new challenges of the time and the requirements of the society [26, 27];
- determining the role of physical self-improvement in the process of modeling the professional activities of servicemen [28, 29];
- working out new fitness programs for the development of motor skills in the conditions of confined space with the use of improvised means [30].

The results of our research confirm the results of the researches [6, 17, 18] on the need to motivate cadets to physical self-improvement, giving them the opportunity to conduct individual physical training.

Our research supplemented and expanded the data on the change of priorities in conducting independent physical exercises under the conditions of limited motor activity during the pandemic [20, 31], as well as research data on the need for systematic pedagogical control over the level of development of professionally necessary physical qualities of cadets [24, 25].

Having carried out the research of formation of physical readiness of cadets for professional activity under the conditions of quarantine we received new data of indicators of physical development of cadets of 18-21 years of age. The comparative analysis with the indicators of physical readiness of cadets under the standard conditions of training made it possible to investigate the changes that occurred as a result of restrictions on motor activity during the quarantine. We were able to establish the impact of different types of independent training on

the development of physical qualities of cadets.

We believe that in the future it is necessary to explore the impact of various programs and the possibility of using new techniques that are aimed at maintaining overall physical shape and the development of certain professionally important physical qualities in the conditions of quarantine restrictions.

5. Conclusions

1. In the process of physical self-improvement, the conscious attitude of cadets to their own physical development, state of health, acquisition of professionally significant skills and abilities is formed. Purposeful physical self-improvement presupposes that cadets have the ability to self-regulate, self-adjust, and mobilize their physical potential to solve given tasks under the determined conditions of activity.
2. It is established that quarantine restrictions of motor activity negatively affect the growth of indicators of physical readiness of cadets to perform their professional tasks. Targeted independent physical exercises can be an alternative to traditional classes.
3. It is established that the leading motives of personality-oriented physical culture and sports activities of cadets are: harmonious development of basic physical qualities - 24.2%; development of professionally necessary skills - 22.7%; self-confidence and confidence in own physical capabilities - 13.9%; personal sports achievements - 12.6%; the need to meet standards and pass tests in physical training - 11.8%.
4. It is determined that the need for purposeful physical self-improvement under the conditions of quarantine was recognized by 84.9% of the cadets. 72.8% of the cadets have a clear program of physical self-improvement. The main priority type of independent classes for cadets is classes in specialized gyms - 41.8%.
5. Independent physical training of cadets during quarantine restrictions allows to preserve physical qualities at professionally necessary level. There was a deterioration in endurance by 2.8-4.2% ($p < 0.01$) with a simultaneous improvement in strength development by 3.5-7.2% ($p < 0.001$).

Conflicts of Interest

No Conflicts of Interest Exist.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards

of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Informed consent was obtained from all individual participants included in the study. All subjects of the institutional survey gave consent to anonymous data to be used for publication purposes.

REFERENCES

- [1] Figura O. "Physical Readiness as an Element of General Professional Readiness of Specialists". *Youth and Market*. No. 12. P. 23-27. 2013.
- [2] Vasiv S.V. "Formation of Interest to Independent Physical Education Classes of Border Cadets". *Bulletin of Luhansk Taras Shevchenko National University*. Luhansk: LNU No. 10 (221), Part 2, P. 76-82. 2011.
- [3] Mozolev O.M. "Theoretical Analysis of the Problem of Forming the Need for Physical Self-Improvement". *Khmelnyskyi: KhIST*, No. 1 (9). P. 94–99. 2014.
- [4] Husak O.D. "Formation of Psychophysical Readiness of Servicemen of Airmobile Subdivisions for Professional Activity in the Process of Physical Training: author's abstract of the dissertation of the candidate of sciences in physical education and sports". Lviv: Lviv State University of Physical Culture 2012.
- [5] Olkhovyi, O.M. "The Concept of Professionally Oriented System of Physical Training of Cadets". *Bulletin of Chernihiv National Pedagogical University. Physical Education and Sports*. No. 112 (2). P. 208–211. 2013.
- [6] Romanchuk S.V. "Study of the Motivation of Servicemen to the Classes of Physical Training and Sports in Order to Increase the Level of Development of Physical Qualities". *Young Sports Science of Ukraine*. Issue 8, Volume 3. P. 317-320. 2004.
- [7] Romanchuk, S. "Self-educational technologies of the commanders of cadets units of higher military educational institutions in the field of physical training and sports". *Journal of Physical Education and Sport*. 2015. Vol. 15, Issue 3. 498–501. 2015. DOI:10.7752/jpes.2015.03075
- [8] Mozolev, O., Kravchuk, L., Ostrovska, N., Nahorna, O., Polishchuk, O., & Khmara, M. "Checking the effectiveness of the method of conducting physical education classes with 17-19 -year-old female students of special medical group". *Journal of Physical Education and Sport*, Vol.20 (2), 870 – 876. 2020. DOI:10.7752/jpes.2020.02124.
- [9] Hodlevskiy P.M., Huzar V.M., Yuskiv S.M. "Formation of Motivation of Cadets to Physical Education Classes". *Scientific and Pedagogical Problems of Physical Culture*. Kyiv: Publishing House of N.P. Drahomanov National Pedagogical University, Issue 5K (113) 19. P. 72-77. 2019.
- [10] Yuskiv S.M. "Features of Interest Formation and Motivation for Physical Education Classes". *Philosophical Horizons of Today: materials of the VI International Scientific-Practical Conference*, Kherson, Kherson State Agrarian and Economic University, 136-141. 2018.
- [11] Hryshchenko D.S. "Conceptual Directions of Improvement of the System of Physical Training and Sports in the Armed Forces of Ukraine under the Conditions of their Reform and Development". Proceedings of the meeting of the section of the Military Scientific Council on military-theoretical issues of the Ministry of Defense of Ukraine. Kyiv: 2016.
- [12] Mozolev, O., Polishchuk O., Kravchuk, L., Tatarin, O., Zharovska, O., Kazymir, V. "Results of monitoring the physical health of female students during the COVID-19 pandemic". *Journal of Physical Education and Sport*, Vol 20 Issue 6, Art # 445 pp. 3280 – 3287. 2020. DOI:10.7752/jpes.2020.s6445.
- [13] Didenko O.V. "The Role of Professional Self-Improvement in the Formation and Development of the Future Officers". *Scientific Bulletin of Chernivtsi University: Pedagogy and Psychology*. Chernivtsi, No. 8. P. 163-167. 2003.
- [14] Vaniuk O. "Organization of Independent Physical Culture and Health Classes at the University". *Bulletin of Zaporizhzhia National University. Physical Education and Sports*. No. 1. P. 5-11. 2014.
- [15] Mozolev, O., Bloschynskiy, I., Prontenko, K., Zdanevych, L., Kruty, K., Popovych, O., Pisotska, L. "Influence of fitness techniques integration on the development of physical qualities and morpho-functional state of adult females". *Hum Mov.* 2021; 22(1):55–63; doi: <https://doi.org/10.5114/hm.2021.98465>
- [16] Syvokhop E.M. "Formation of Readiness for Self-Knowledge of the Future Border Guards in the Process of Physical Training": author's abstract of the dissertation of the candidate of pedagogical sciences: 13.00.04. Khmelnytskyi, 2011.
- [17] Tsios A. "Motor Activity in Motivational and Value Orientations of Students". *Physical education, sports and health culture in modern society*. Lutsk: Lesia Ukrainka Eastern European National University, No.4 (28). 83–87. 2014.
- [18] Zakharchenko, M. "Formation of motivation for physical education of boys and girls". *Physical Culture, Sport and Health of the Nation*, 3 (22), 82–87. 2017.
- [19] Mozolev, O., Polishchuk, O., Shorobura, I., Miroshnichenko, V., Tushko, K., Voloshyn, V., Tomkiv, I., Binkovskiy, O., "Motor Activity and Physical Abilities of Students in the Conditions of Restrictions of COVID-19," *International Journal of Human Movement and Sports Sciences*, Vol. 9, No. 3, pp. 428 - 435, 2021. DOI: 10.13189/saj.2021.090306.
- [20] Hambali, S., Akbaruddin, A., Bustomi, D., Rifai, A., Iskandar, T., Ridlo, A., Meirizal, Y., Rusmana, R., Tyas, R. "The Effectiveness Learning of Physical Education on Pandemic COVID-19". *Universal Journal of Educational Research* 8(12 B): 8428 – 8432, 2020. DOI: 10.13189/ujer.2020.082649.
- [21] Zhamardiy, V., Shkola, O., Okhrimenko, I., Strelchenko, O.,

- Aloshyna, A., Opanasiuk, F., Griban, G., Yahodzinskiy, V., Mozolev, O., Prontenko, K. "Checking of the methodical system efficiency of fitness technologies application in students' physical education". *Wiadomości Lekarskie*, 73 (2), 332–341. 2020. doi: 10.36740/WLek202002125
- [22] Mozolev, O., Bloshchynskiy, I., Alieksieiev, O., Romanyshyna, L., Zdanevych, L., Melnychuk I., Prontenko K., & Prontenko V. "Influence of modern fitness technologies on the state of health and development of motor abilities of 17-19-year-old female students". *Journal of Physical Education and Sport*, Vol.19 (3), 917 – 924. 2019. DOI: 10.7752 / jpes.2019.3132.
- [23] Zakhozhyi V.V. "Dosing of Physical Activity for Independent Physical Exercises of Students. Physical Education, Sports and Health Culture in Modern Society". Lutsk: Volyn Lesia Ukrainka National University, No. 2 (6). P. 39-42. 2009.
- [24] Prontenko, K., Griban, G., Medvedeva, I., Okhrimenko, I., Yuriev, S., Dzenzeliuk, D., Kuznietsova, O., Yavorska, T., Dovgan, N., Tkachenko, P., Khatko, A., Mozolev, O. (2019). "Development of cadets' physical qualities during various sports activities". *Contemporary dilemmas: Education, Politics and Values*, Year VII, Special Edition, December 2019, <https://www.dilemascontemporaneoseducacionpolitica.yvalores.com/en/edici%e2%99%80n-2013/year-vi-special-edition-december-2019/>
- [25] Griban, G., Skoruy, O., Pantieliciev, K., Brytan, Y., Tymchyk, M., Kharchenko, N., Skyrda, T., Halimov, A., Shorobura, I., Mozolev, O. "Influence of Physical Education Classes on the Level of Health and Fitness Competencies of Students". *International Journal of Applied Exercise Physiology* www.ijaep.com VOL. 9 (12) pp. 107-118. 2020. Doi: 10.26655/IJAEP.2020.12.1
- [26] Mozolev, O., Halus, O., Bloshchynskiy, I., & Kovalchuk, R. "Human resources management of educational development in sphere of physical culture and sports in Ukraine: comparative analysis (1992- 2016)". *Journal of Physical Education and Sport*, Vol.19 (1), 185-192. 2019. DOI:10.7752/jpes.2019.s1028.
- [27] Soltyk, O., Pavlyuk, Y., Vynogradskiy, B., Pavlyuk, O., Chopyk, T., Antoniuk, O. "Improvement of professional competence of future specialists in physical education and sports during the process of vocational training". *Journal of Physical Education and Sport*, Vol. 17 (3), pp. 964–969, 2017, doi:10.7752/jpes.2017.s3148.
- [28] Sergienko, Y. "Model of professional readiness of students of higher military schools of the Armed Forces of Ukraine". *Physical Education of Students*. Vol. 6. P. 66–72. 2013.
- [29] Mozolev, O. "Pedagogical Projecting of the Model of a Future Specialist". *Pedagogical Discourse*, 24, 82–87. 2018. DOI: 10.31475/ped.dys.2018.24.12
- [30] Khmara M., Mozolev, O., Yashchuk, I., Alieksieiev, O., Kravchuk, V., Dolynniy, Yu., Tomkiv, I., Binkovskiy, O., Prontenko, V. "Effectiveness of the Fitness Program «WAY TO A HEALTHY LIFE»," *International Journal of Human Movement and Sports Sciences*, Vol. 9, No. 5, pp. 833 - 840, 2021. DOI:10.13189/saj.2021.090501.
- [31] Nurulfa, R., Motto, C., Dlis, F., Tangkudung, J., Lubis, J., Junaidi. "Physical Education Survey during the COVID-19 Pandemic in Eastern Indonesia". *Universal Journal of Educational Research* 8(12 B): 8420 – 8427, 2020. DOI: 10.13189/ujer.2020.082648