

Ukrainian folk outdoor games in the system of physical training facilities for gymnasts aged 6-7 years

Alfiia Deineko¹
Mirosława Cieslicka²
Inna Krasova¹
Iryna Bilenka¹

¹Kharkiv State Academy of Physical Culture, Kharkiv, Ukraine
²Collegium Medicum in Bydgosz, Nicolaus Copernicus University in Torun, Poland

Abstract

Purpose: to substantiate the effectiveness of the use of Ukrainian outdoor games to increase the level of physical preparedness of 6-7 year old gymnasts.

Material & Methods: the study involved 22 female athletes aged 6-7 years old involved in artistic gymnastics. The main and control groups included 11 female gymnasts each. Ukrainian outdoor games were included in the training process of the main group.

Results: the results of the study indicate that the proposed methodology, by which female gymnasts of the main group (MG) trained, contributed to a more pronounced ($p < 0,05$; $p < 0,01$) increase in the level of physical fitness compared to the results of female athletes of the control group (CG) who trained according to the traditional program for the development of physical qualities, except for the development of flexibility, where there was a statistically unreliable difference between the performance of female gymnasts of the main and control groups ($p > 0,05$).

Conclusions: results of the implementation of the methodology for increasing the level of physical preparedness of female gymnasts aged 6-7 years using Ukrainian folk outdoor games testify to its effectiveness. The results obtained allow us to recommend the developed methodology for use in the training process of young female gymnasts at the stage of initial training.

Анотація

Альфія Дейнеко, Мірослава Цеслицька, Інна Красова, Ірина Біленька. Українські народні рухливі ігри у системі засобів фізичної підготовки гімнасток 6-7 років. **Мета:** обґрунтувати ефективність використання українських народних рухливих ігор для підвищення рівня фізичної підготовленості гімнасток 6-7 років. **Матеріал і методи:** у дослідженні прийняли участь 22 спортсменки 6-7 років, які займаються спортивною гімнастикою. В основну і контрольну групи входило по 11 гімнасток. В тренувальний процес основної групи були включені українські народні рухливі ігри. **Результати:** отримані результати дослідження свідчать, що запропонована методика, за якою тренувалися гімнастки основної групи (ОГ), сприяла більш вираженому ($p < 0,05$; $p < 0,01$) підвищенню рівня фізичної підготовленості порівняно з результатами спортсменок контрольної групи (КГ), які тренувалися за традиційною програмою розвитку фізичних якостей, окрім розвитку гнучкості, де спостерігалися статистично не достовірні різниця між показниками гімнасток основної і контрольної групи ($p > 0,05$). **Висновки:** результати впровадження методики для підвищення рівня фізичної підготовленості гімнасток 6-7 років з використанням українських народних рухливих ігор свідчать про її ефективність. Отримані результати дають підставу рекомендувати розроблену методику для використання в тренувальному процесі юних гімнасток на етапі початкової підготовки.

Introduction

In the context of growing competition in gymnastics, the physical training of athletes is of particular importance as one of the main factors in the high efficiency of the training and competitive process (Gavrdovskij, 2014; Platonov, 2015; Deyneko et al., 2021). As you know, performance in elite sport is determined not by one physical quality, but by their combination (Gavrdovskij, 2014; Deyneko & Bilenka, 2021; Podrihalo, 2021). Therefore, the problem of the development of physical properties is relevant in all sports from the moment of early specialization, including in gymnastics. The analysis of scientific and methodological literature showed that in the practice of

Original Paper

DOI: 10.15391/sns.v.2022-2.004
Received: 19.05.2022;
Published: 25.06.2022

Citation:

Deineko, A., Cieslicka, M., Krasova, I. & Bilenka, I. (2022). Ukrainian folk outdoor games in the system of physical training facilities for gymnasts aged 6-7 years. *Slobozhanskyi Herald of Science and Sport*, 26(2), 52-57. doi: 10.15391/sns.v.2022-2.004

Corresponding author:

Alfiia Deineko
Kharkiv State Academy of Physical Culture, Kharkiv, Ukraine
orcid.org/0000-0001-7990-7999
e-mail: deineko.alfiy@gmail.com

Mirosława Cieslicka
orcid.org/0000-0002-0407-2592
Inna Krasova
orcid.org/0000-0002-8111-3917
Iryna Bilenka
orcid.org/0000-0002-8336-3100

Key words:

female gymnasts
Ukrainian folk games
physical fitness
testing

Ключові слова:

гімнастки
українські народні рухливі ігри
фізична підготовленість
тестування

physical education and sports a large number of methods are used aimed at developing physical qualities, one of which is the game (Danish, 2002; Vil'chkovs'kyy & Kurok, 2005; Hardman, 2008; Vil'chkovs'kyy, 2009; Deyneko, 2017; Deyneko et al., 2022). It is well known that children of 6-7 years old, due to ontogenetic features of development, are characterized by increased motor activity and a pronounced need for it (Danish, 2002; Bohinich, 2003; Vil'chkovs'kyy & Kurok, 2005; Bar – Or, 2009; Kraemer, 2011; Isayeva & Konyk, 2018; Deyneko et al., 2022). That is why the use of outdoor games helps the coach improve physical qualities, give emotional coloring and introduce elements of competition into the training process, which has a positive effect on the sports training of female gymnasts (Vil'chkovs'kyy & Kurok, 2005; Koval'chuk & Sanyuk, 2018; Deyneko et al., 2021; Deyneko et al., 2022). This fact actualizes the use of a wide range of outdoor games, including folk ones, as a key aspect of not only an integral part of the national culture and patriotic education, but also the formation of a sustainable sports interest in training and improving the motor skills of young athletes. Through the comprehension of folk gaming culture, the child enters the world of interpersonal relationships with peers, enriches spiritual experience, learns the history of his native people, his customs, traditions, national characteristics, gains knowledge about the world around him, develops and improves motor skills and abilities (Kraft, 1987; Kolyshkin, 1999; Danish, 2002; Shevchenko, 2003; Bohinich, 2003; Vol'chyns'kyy, 2009; Deyneko, 2017; Deyneko et al., 2022). However, in the practical sports activities of female gymnasts 6-7 years old, there are no methods for introducing Ukrainian folk outdoor games, despite the fact that the program material suggests their use. Therefore, replenishment of the content of the educational and training process in artistic gymnastics with Ukrainian folk outdoor games is relevant and is of interest to scientific research.

An analysis of scientific literature has shown that most specialists in Western European countries recognize the important role of the motor activity of a child aged 5-8 years with the help of games (Kraft, 1987; Danish, 2002; Bar-Or, 2009; Turchyk, 2017). In many European countries, especially in England, since the end of the last century, in order to strengthen the gaming orientation of children's and youth sports, it has been proposed to use not only traditional outdoor games, but also folk, story, adventure, sports-dynamic and intellectual games, relay races and national sports, etc. (Williams, 1985; Kraft, 1987; Hardman, 2008). In almost all European countries (England, France, Germany, Denmark, Ireland, Austria, etc.), in educational programs related to the physical education of children in preschool education and primary school, there are outdoor and sports games, which are regulated by classroom and extracurricular forms of taking into account the interests of children (Williams, 1985; Kraft, 1987; Balz et al., 2005; Dallermassl, 2007; Hardman, 2008; Turchyk, 2017). It is important to emphasize that in each program of play activities about 50-70% of the total study time is devoted. Thus, most children under the age of 5-6 go through a program of planned and structured play situations (Kraft, 1987; Bar – Or, 2009).

Connection with scientific programs, plans, topics.

The study was conducted in accordance with the initiative topic of the scientific research of the Department of Gymnastics, Dance Sports and Choreography of the KhSAPC: "Theoretical and methodological foundations for the development of backbone components of physical culture (sports, fitness and recreation) for 2020-2025, state registration number

0120U101215».

Purpose of the study: to evaluate the effectiveness of the use of Ukrainian folk outdoor games to increase the level of physical fitness of female gymnasts 6-7 years old.

Material and Methods of the research

Participants

The study involved 22 female athletes aged 6-7 years who train in the initial training group of the first year of study. Two groups were formed from the study participants: the main group (MG) and the control group (CG) of 11 female gymnasts in each. All gymnasts and their parents were informed about the nature of the study and gave their informed consent to participate and process the data obtained.

Methods

To achieve the goals set during the study, pedagogical testing, a pedagogical experiment, and methods of mathematical statistics were used. To assess the level of physical fitness of female athletes aged 6-7, 7 tests were selected, five of which are offered by the Artistic Gymnastics Curriculum for Youth Sports Schools, schools of higher sportsmanship: "raising straight legs in the hang", "pulling in the hang" - to assess the strength abilities of athletes; tests "long jump from a place", "running 20 meters" and "jumping rope in 1 minute." were used to assess the speed-strength abilities; test "performing three twines" - to assess flexibility. To assess the coordination abilities, the test "static balance according to the Yarotsky method" was used. Rope jumping is offered by the training program as a general physical fitness exercise.

Procedure

According to the results of the initial testing, the group of female gymnasts was divided into the main ($n=11$) and control ($n=11$) groups, taking into account the absence of significant differences in the indicators of the proposed test exercises. Testing the level of physical fitness of female gymnasts aged 6-7 was carried out twice - at the beginning (October) and at the end of the training year (May). Both groups of young female gymnasts trained in accordance with the Curriculum for Youth Sports Schools, schools of the highest sportsmanship in artistic gymnastics. However, more than 20 specially selected Ukrainian folk outdoor games aimed at developing physical qualities were included in the training sessions of female gymnasts of the main group ($n=11$). It should be noted that in the first year of study, the program material involves the use of outdoor games and relay races as the main means of general physical training of gymnasts. But the time that you need to spend on games in the tutorial is not indicated. The developed methodology involved the use of folk outdoor games in all three parts of the lesson. The total time is 25-30 minutes for each workout, depending on his tasks. Once every 2 weeks, a training session consisted exclusively of playing multidirectional activities.

During the study, Ukrainian folk outdoor games were one of the main means of physical training for young gymnasts. Of great importance was the choice of the content of the game. Most often, games were used that were aimed at the complex development of physical qualities: speed, strength, speed-strength qualities, coordination abilities. But when selecting games, the tasks of training and the direction of the exercises used on it were taken into account. If the training was dominated by strength exercises, then the games were used, for example, to develop flexibility, coordination abilities

and endurance. Such a mandatory alternation of the focus of games on different muscle groups was taken into account at each lesson in order not to interfere with mastering the program material on gymnastic devices due to the development of fatigue from the work of the same muscles.

It is known that time changes the content of games, creates many different options, but their motor basis remains unchanged. Therefore, all the proposed games were adapted to the educational and training process of young female gymnasts and became more difficult as they mastered them. Such games were used as "Zaporozhets in the Sich", "Gopak", "Panas", "Competition of strongmen", "Kreschik", "Grey cat", "Wolf and goats", "Hawk and mother hen", "Through the forest", "Crooked Duck", "Avalanche", "Goose", "Circle", "Pits", "Hatchling", "Jumps", "Patch", "Fifteen With Revenue", "Hares", "Tangled Horses", "Sharpshooter", "Kvach with a ball", "Spider", "Hunter and ducks", "Tunnel", etc. In these games, a variety of general developmental exercises, running, jumping, throwing, climbing, elements of struggle and dance, exercises with objects, with throwing and catching objects, and orientation in space were widely used. Also, games to maintain balance were used: "Swing", "Crane", "Swallow", "Cancer - Poor Man", "Twist - Twist", "Mill"; games with elements of acrobatics. "Crab", "Cuttlefish", "Recats field", "Spider", "Frog", "Duck"; competition games. To develop flexibility, a special approach was proposed that allows introducing some elements of novelty into the content of already existing traditional games, such as "Chaplya", "Needle - Thread", "Poppy Poppy", "Shagardai": movements of arms and legs with a large amplitude, performance of tasks games in the leaning position and during turns, deep lunges, etc. This is due to the fact that there are very few Ukrainian outdoor games for the development of flexibility, so the changes that already existed were made, which made it possible to complicate the movements and increase the interest of gymnasts in the game.

An important component of the methodology was prepared in advance and adapted to the training process, folk musical games with the words of the song ("Sawmill", "And we sowed millet, sowed", "Oh, the cuckoo flew", "Pear", "Poppy", "Winter", "Spring", "Summer", "Autumn"), held in the preparatory part of the lesson in the form of sets of exercises for the development of physical qualities. Certain movements were performed to the words of the song: squats,

lunges, stops, leg swings, tilts, turns, jumps, transitions from a standing position to a sitting position, lying down and back, the content of postures, stylized varieties of walking and running in place and in motion, the content of various poses with and without visual control, elements of acrobatics, etc. During the games, their meaning did not change, the idea of the game was always preserved, but the motor actions were constantly renewed and complicated. Thus, not only the training effect from the use of folk outdoor games was achieved, but also the interest and motivation for classes increased. In the final part of the lesson, calm musical games were used for attention, relaxation, holding postures, and flexibility. During the games, the desire of athletes to display creative initiative, activity and improvisation was encouraged.

Thus, the content of Ukrainian folk outdoor games used in training sessions to improve the physical fitness of female gymnasts met the following requirements: firstly, it contributed to mastering the exercises of the classification program for elementary training groups; secondly, it corresponded to the morphofunctional and mental characteristics of the development of children aged 6-7 years, the level of their physical and technical readiness; thirdly, it corresponded to the features characteristic of the game method. Consequently, the use of Ukrainian folk games throughout the study has become the main method of complex improvement of physical qualities in the educational and training process of young female athletes.

Statistical analysis

Statistical analysis of the results was carried out using descriptive statistics indicators using licensed Excel spreadsheet packages and a set of built-in functions. The characteristics of descriptive statistics were determined: the arithmetic mean and the standard deviation. The assessment of the statistical significance of the results of a comparative analysis of the indicators of the main and control groups that were studied was carried out using the non-parametric Rosenbaum test (Q).

Results of the research

At the beginning of the study, the level of physical fitness of female gymnasts aged 6-7 years of the main and control groups was tested, the characteristics of which are presented in Table 1.

Table 1
Indicators of the level of physical fitness of female gymnasts aged 6-7 years at the beginning of the study ($t_{gr.} = 2,08$ at $p < 0,05$)

Test №	Tests	Main group (n=11)	Control group (n =11)	t_p	P	
		$\bar{X} \pm m$	$\bar{X} \pm m$			
T1	Strength qualities «Rise of straight legs in the hang» (number of times)	6,90±0,73	6,45±0,39	0,55	p>0,05	
T2	Strength qualities «Pull-ups» (number of times)	7,36±0,47	6,81±0,69	0,66	p>0,05	
T3	Speed-strength qualities «Standing long jump» (cm)	129,90±4,20	118,72±4,69	1,78	p>0,05	
T4	Flexibility «Performing three twines» (points)	1) on the right leg	3,54±0,41	3,10±0,38	0,78	p > 0,05
		2) on the left leg	4,39±0,38	3,90±0,37	0,91	p > 0,05
		3) transverse	5,36±0,39	5,72±0,51	0,57	p > 0,05
T5	Coordination abilities «Static balance according to the Yarotsky method» (s)	19,09±1,44	18,36±1,18	0,39	p>0,05	
T6	Speed «Running 20 m» (s)	4,28±0,31	4,10±0,16	0,53	p>0,05	
T7	Speed-strength endurance «Jumping rope for 1 min» (number of times)	41,72±3,14	36,45±1,52	1,51	p>0,05	

Table 2
Indicators of the level of physical fitness of female gymnasts aged 6-7 years at the final stage of the study

Test №	Tests	Main group (n=11)	Control group (n=11)	Q (S1+S2)	Qcr
		$\bar{X} \pm m$			
T1	Strength qualities «Rise of straight legs in the hang» (number of times)	9,18±0,67	7,18±0,63	6	p<0,05
T2	Strength qualities «Pull-ups» (number of times)	10,18±0,62	7,72±0,73	7	p<0,05
T3	Speed-strength qualities «Standing long jump» (cm)	150,63±3,15	131,27±3,78	12	p<0,01
T4	Flexibility 1) ontherightleg	2,37±0,24	2,73±0,33	5	p >0,05
	«Performing three twines» (points) 2) ontheleftleg	3,44±0,28	3,02±0,22	0	p >0,05
	3) transverse	4,32±0,32	4,57±0,24	0	p >0,05
T5	Coordination abilities «Static balance according to the Yarotsky method» (s)	25,63±1,06	21,63±1,45	6	p<0,05
T6	Speed «Running 20 m» (s)	3,60±0,11	3,97±0,14	11	p<0,01
T7	Speed-strength endurance «Jumping rope for 1 min» (number of times)	51,72±2,50	42,00±2,22	7	p<0,05

As a result of the analysis of statistical indicators of the level of physical fitness of female athletes from the MG and CG, carried out at the beginning of the study, the unreliability of the differences in the results obtained for all the proposed tests was revealed. Thus, we state the acceptable difference in the initial level of physical fitness of athletes of both groups (Table 1).

After 6 months of training according to the developed method of using Ukrainian folk outdoor games, a re-testing of the level of development of physical fitness of young female gymnasts of the main and control groups was carried out. The results obtained are presented in Table 2.

With the help of non-parametric criterion of signs of Rosenbaum at the final stage of the study, an assessment was made of the reliability of differences in the average statistical values of physical fitness indicators of female gymnasts of the main and control groups. So in the tests T1 "Rise of straight legs in the hang" (number of times); T2 "Pulling up" (number of times); T5 "Static balance according to the method of Yarotsky" (s); T7 "Jumping rope in 1 minute" (number of times) significant differences in test scores were found with a probability of 95% at $p \leq 0,05$ between the main and control groups. In tests T3 "Standing long jump" (cm) and T6 "Running 20 m" (s), significant changes in the results between the main and control groups were also determined with a probability of 99% at $p \leq 0,01$. Obtained significant improvement in the results of these tests prove the effectiveness of the use of Ukrainian outdoor games to increase the level of physical fitness of female gymnasts 6-7 years old, in addition to the development of flexibility. So, in T4 "Performance of three s twines" (points), an unreliable difference was obtained between the indicators of female gymnasts of the main and control groups ($p > 0,05$), although their improvement occurred in both groups. Such results can be explained by the fact that at the stage of initial training a large number of effective exercises for the development of flexibility are used, provided for by the training program and which were widely used in the training process, both in the main and in the control group. And the games for the development of flexibility, which were used in the methodology, did not have such exercises, which is primarily related to safety, because performing movements with a large amplitude in the game or in a state of excitement can lead to injury. Therefore, the

improvement in flexibility indicators in both groups, in our opinion, is associated with the effectiveness of the training process, and not with the use of outdoor folk games (Table 2). As for the development of flexibility at the stage of initial training in artistic gymnastics, traditionally in the training process special exercises, children's simulators and devices are used to effectively and safely develop this quality and reach the level that is required individually for each female gymnast. And folk outdoor games for the development of flexibility do not give a training effect that can be achieved by using them for the complex development of physical qualities, which is confirmed by significant changes in indicators for all other tests.

Discussion

An analysis of literary sources revealed the unanimous opinion of domestic and foreign experts regarding the statement that in order for a child to develop normally, he must be taught to play, therefore outdoor games are an ideal means of physical education (Kraft, 1987; Kolyshkin, 1999; Danish, 2002; Bohinich, 2003; Vil'chkovs'kyy & Kurok, 2005; Vol'chyns'kyy, 2006; Vol'chyns'kyy, 2009; Deyneko et al., 2022). The results of the conducted research complement the data of Bohinich (2003), Volchnskinky (2009), Shevchenko (2003), Vilchkovskovyky and Kurok (2005), Danish (2003), Bar-Or (2009) and others on the need to introduce folk outdoor games into the practice of educational institutions which in a complex solve cognitive, educational, developing and educational tasks. We confirm the opinion of these scientists that folk outdoor games are an important means of educating children, contribute to the expansion of knowledge about the world around them, provide aesthetic pleasure from movements, create prerequisites for consolidating motor skills and developing physical qualities. Danish (2003), emphasizes that play activity stimulates the social and personal development of everyone, is a source of entertainment and success for everyone, allows the acquisition and improvement of skills, and also cultivates the characteristic "sporting traits": self-control, discipline, cooperation, tolerance and respect to others.

We share the opinion of experts that the most effective method of conducting classes in initial training groups is the game (Bohinich, 2003; Vil'chkovs'kyy & Kurok, 2005;

Martinek et al., 2006; Bar – Or, 2009; Gaverdovskij, 2014). It is considered the most effective in solving the problems of developing the physical qualities of young athletes. Bar – Or (2009), Smolevskyy & Haverdovskyy (1999), Vil'chkovs'kyy & Kurok (2005), Bohinich (2003) note that game elements are used in all parts of the training session.

The data of Bar - Or (2009), Vil'chkovs'kyy & Kurok (2005), Bohinich (2003), Kraemer (2011), Weinberg and Gould (2003) on the effectiveness of using game and competitive methods in the physical training of female athletes of 5–6 years of age have been confirmed.

We also agree with the statement of experts (Smolevskyy & Haverdovskyy, 1999; Weinberg & Gould, 2003; Kraemer, 2011; Gaverdovskij, 2014; Platonov, 2015; Turchyk, 2017; Deyneko & Bilen'ka in direct proportion to the means used in the classroom, according to physiological characteristics of children of primary school age.

An analysis of the scientific literature allows us to state that in European countries, in almost every educational program of general education and sports schools, special attention is paid to sports and outdoor games and they are held in class and extracurricular forms, taking into account the interests of children. (Williams, 1985; Kraft, 1987; Balz et al., 2005; Dallermassl, 2007; Broeke et al., 2007; Hardman, 2008; Bar – Or, 2009; Turchyk, 2017). We agree with specialists from England, France, Austria, Denmark, Germany, etc., who, in order to strengthen the gaming orientation of children's and youth sports, propose to use not only traditional motor games, but also folk games, national sports, story, adventure, sports-dynamic and intellectual games, relay games, etc. Also, students are encouraged to compose new outdoor games and competitions, which allows children to develop their creative abilities (Kraft, 1987). In most Western European countries, the important role of the motor activity of a child under the age of 7-8 years with the use of games is recognized (Williams, 1985; Kraft, 1987; Bar-Or, 2009; Turchyk, 2017). W. Laporte (1999), Analyzing the physical education program in the EU countries, we came to the conclusion that there is no significant difference between them. All contain physical improvement, motor competencies, sports skills, educational

and valueological values of motor activity.

Nevertheless, it should be noted that there are opposing opinions regarding the importance of play and competitive activities in teaching children of primary school age. Stolyarov (1997) quotes F. Fielding in his writings: "I reject the use of competition in schools: competition as a social ideal seems to me disgusting, they are morally unacceptable". But the results of our study confirm the opinion of many of the above-mentioned authors that play activity is an ideal means of physical education for children of primary school age (Kraft, 1987; Kolyskin, 1999; Danish, 2002; Bohinich, 2003; Vil'chkovs'kyy & Kurok, 2005; Vol'chyns'kyy, 2009; Deyneko et al., 2022).

Conclusions

According to the results of the study, it was found that the use of Ukrainian folk outdoor games in the training process of female gymnasts 6-7 years old is an important means for increasing the level of physical fitness. The value of folk outdoor games lies in the fact that the acquired motor experience creates the necessary prerequisites for further successful sports activities.

The results of the study indicate that the proposed methodology, by which the female gymnasts of the CG trained, contributed to a more pronounced ($p < 0,05$; $p < 0,01$) increase in their level of physical fitness compared to the results of female athletes from the CG who trained according to the traditional program for the development of physical fitness. The results obtained confirmed the effectiveness of the use of Ukrainian folk outdoor games as the main means of developing the physical qualities of female gymnasts aged 6-7, which allows us to recommend the developed methodology for use in the training process of young female gymnasts at the stage of initial training.

Prospects for further research are the introduction of Ukrainian folk outdoor games in the educational and training process of the Youth Sports School, clubs and specialized educational institutions for further improvement and study of the impact on the competitive result of young female gymnasts.

Author Contributions

Alfiia Deineko: data collection, input, statistics; Mirosława Cieslicka: design, research planning; Inna Krasova: interpretation of data, preparation of the manuscript; Iryna Bilenka: analysis, literature search, fundraising.

Funding

This article didn't receive financial support from the state, public or commercial organizations.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Balz, E., Neumann, P., Puhse, U., & Gerber, M. (2005). Physical Education in Germany. *Inter-national Comparison of Physical Education*, 292-309.
- Bar-Or, O. (2009). *Zdorov'e detej i dvigatel'naya aktivnost': ot fiziologicheskikh osnov do prakticheskogo primeneniya*. Kiev, Olimpijskaya literatura, 528.
- Bohinich, O. L. (2003). *Fizychne vykhovannya ditey doshkil'noho viku zasobamy hry: navch. posib. 2-he vyd., ster.* Kyiv: NPU, 140.
- Broeke, A., Van Dalfsen, G., Klein, G., & Hardman, K. (2007). *Physical Education and Sport Education in the European Union: The Netherlands. Physical Education and Sport Education in the European Union*. Editions Revue EPS., Paris.
- Dallermassl, K. (2007). *Physical Education and Education through Sport in Austria. Physical Education and Sport Education in the European Union*. Editions Revue EPS., Paris.
- Danish, S. J. (2002). *Teaching life skills through sport. Paradoxes of youth and sport*. Albany, NY: State University of New

York Press, 49-59.

- Deyneko, A. Kh. (2017). Efektyvnist' vykorystannya ihrovoho metodu dlya rozvytku shvydkisno-sylovykh zdibnostey sport-smeniv-batutystiv na etapi pochatkovoyi pidhotovky. *Slobozhans'kyy naukovo-sportyvnyy visnyk*, 3(59), 22-25, doi: <https://doi.org/10.15391/sns.v.2017-3.004>
- Deyneko, A. Kh., & Bilen'ka, I. H. (2021). Vdoskonalennya rozvytku hnuchkosti himnastok 8-9 rokiv z vykorystannyam «STRETCHING» prohramy. *Naukovyy chasopys Natsional'noho pedahohichnoho universytetu imeni M.P. Drahomanova*, 10(141)21; 42-46, doi: [https://doi.org/10.31392/NPU-nc.series15.2021.10\(141\).10](https://doi.org/10.31392/NPU-nc.series15.2021.10(141).10)
- Deyneko, A. Kh., Shcherbak, R. M., & Fishev, Yu. O. (2021). Sylova pidhotovlenist' khloptsiv 6-7 rokiv v sportyvniy himnastytsi: dosvid vykorystannya ihrovoho metodu. *Naukovyy chasopys Natsional'noho pedahohichnoho universytetu imeni M.P. Drahomanova*, 1 (129) 21; 31-34, doi: [https://doi.org/10.31392/NPU-nc.series15.2021.1\(129\).07](https://doi.org/10.31392/NPU-nc.series15.2021.1(129).07)
- Deyneko, A.Kh., Marchenkov, M. K., & Pavlenko, A. O. (2022). Ukrayins'ki narodni rukhlyvi ihry yak zasib rozvytku fizychnykh yakostey yunykh himnastok. Aktual'nye nauchnye yssledovanyya v sovremennom myre: zhurnal. *Pereyaslav*, 1(80)2; 40-44.
- Gavardovskij, Yu. K. (2014). *Teoriya i metodika sportivnoj gimnastiki*. T1. Moskva: Sovetskij sport, 368.
- Hardman, K. (2008). The situation of Physical Education in schools: a European perspective. *Human Movement*, 9(1):5-18, doi:10.2478/v10038-008-0001-z
- Isayeva, M. V., & Konyk, L. V. (2018). Osoblyvosti metodyky provedennya rukhlyvykh ihor v molodshyy shkoli. *Zdorov'ya natsiyi i vdoskonalennya fizkul'turno-sportyvnoyi osvity v Ukraini: tezy dopov. V Vseukr. nauk.-prakt. konfer., Kharkiv*, 57-60.
- Kolyshkin, O. V. (1999). Ukrayins'ki natsional'ni rukhlyvi ihry u fizychnomu vykhovanni shkol'nykh molodshoho viku : metodychni rekomendatsiyi. Sumy : redaktsiyno-vydavnychyy viddil SDPI imeni A. S. Makarenka, 85.
- Koval'chuk, N. M., & Sanyuk, V. I. (2018). Rukhlyvi ihry na zanyattyakh iz himnastyky: metodychna rozrobka. Luts'k: Vezha-Druk, 92.
- Kraemer, W. (2011). *Exercise Physiology: Integrating Theory and Application*. Baltimore: Lippincott Williams & Wilkins, 512 p.
- Kraft, R. (1987). Learning through games discovery. *The Physical Educator*, №4, 18-22.
- Laporte, W. (1999). Physical Education in European Union in harmonisation process. *European Physical Education Association: Newsletter*, 4; 12.
- Martinek T., Schilling, T. & Hellison, D. (2006). The development of compassionate and caring leadership among adolesce. *Physical Education and Sport Pedagogy*. № 11(2); 141-157.
- Matviyenko, C. I., & Zaplishnyy, I. I. (2017). Ukrayins'ki narodni rukhlyvi ihry u doshkil'nomu navchal'nomu zakladi : navch. posib, Nizhyn : NDU im. M. Hoholya, 152.
- Platonov, V. N. (2015). *Sistema podgotovki sportsmenov v olimpijskom sporte. Obshchaya teoriya i ee prakticheskie prilozheniya: uchebnik dlya trenerov*. Kn. 1. Kiev: Olimpijskaya literatura, 680.
- Podrihalo, O. O., Podrigalo, L. V., Kiprych, S. V., Galashko, M. I., Alekseev, A. F., Tropin, Y. M., Deineko, A. Kh., Marchenkov, M. K., & Nasonkina, O. Yu. (2021). The comparative analysis of morphological and functional indicators of armwrestling and street workout athletes. *Pedagogy of Physical Culture and Sports*, 25(3); 188-193.
- Sergienko, L. P. (2010). *Sports metrology: theory and practical aspects*. Kyiv, 776.
- Shevchenko, O. V. (2003). Rukhlyvi ihry ta zabavy: navch.-metod. posib. Kirovohrad : RVV KDPU im. V. Vynnychenka, 106.
- Smolevskyy, V. M., & Haverdovskyy, Yu. K. (1999). *Sportyvna hymnastyka: pidruchnyk*. Kyiv, Olimpiys'ka literatura, 463.
- Sportyvna hymnastyka (2003). *Navchal'na prohrama dlya DYUSSH, DYUSHOR, SHVSM / Eretyk A. A., Tereshchenko I. A., & Dobrovol'skyy E. S. Kyev*, 139.
- Stolyarov, V. I. (1997). Sport and modern culture: methodological aspect *Theory and practice of physical culture*, 7; 2-5.
- Turchyk, I. Kh. (2017). *Fizychno vykhovannya i sport u shkil'niy osviti Yevropy: monohrafiya*. Drohobych: Shvydkodruk, 138.
- Vil'chkovs'kyy, E. S., & Kurok, O. I. (2005). *Teoriya i metodyka fizychnoho vykhovannya ditey doshkil'noho viku: navch. posib*. 2-he vyd., pererob. ta dopov. Sumy: Universytet-s'ka knyha, 428.
- Vol'chyns'kyy, A. Ya. (2009). Ukrayins'ki narodni rukhlyvi ihry v systemi fizychnoho vykhovannya doshkil'nyat: monohrafiya. Luts'k, 148.
- Weinberg, R. S., & Gould, D. (2003). *Foundations of Sport & Exercise Psychology: Third Edition*. Human Kinetics, 586.
- Williams, T. (1985). *School health education in Europe*. Southampton: University of Southampton, 34-38.