

Physical Education of Different Groups

UDK: 796.012-053.5

ORGANIZATION AND METHODOLOGICAL BASIC CONCEPTS OF PHYSICAL ACTIVITY OF PRE-SCHOOLERS

Anatoliy Volchynsky¹, Yaroslav Smal¹, Oleksandr Malimon¹, Andrii Kovalchuk¹, Olga Roda¹

¹Lesya Ukrainka Eastern European National University, Lutsk, Ukraine, vaj65@ukr.net

<https://doi.org/10.29038/2220-7481-2018-01-46-51/>

Abstract

Nowadays, we observe an inadequate state of children's health, poor physical fitness of pre-schoolers caused by low level of motor activity. The intensive search for ways to improve physical education in pre-school educational institutions has been conducted in order to solve this problem. Pre-schoolers have a biological need for movement, they enjoy the process of motor activity which is to embrace various physical exercises and games. The positive emotions, interest and pleasure, that games cause, gradually become a habit of systematically engaging in physical training. The objective of the research is to provide theoretical justification and experimental verification of the performance of pre-schoolers' motor activity when using Ukrainian folk fun and play. **Methods.** the analysis of scientific and methodological cited literature, the testing of pre-schoolers, the pedagogical experiment. **Results.** The correct organization of classes on physical education in pre-school educational institutions provides the activation of their motor activity which is necessary for improving the physical and mental fitness of a child during the day. The techniques developed in this research have included Ukrainian folk fun and play introduced at physical education classes and during walks. Games of different intensity and orientation were supposed to alternate in the structure of motor activity of children. Experiment data showed that during the experiment, in the experimental groups of 5-and 6-year-old children the quality of performing the test tasks significantly increased compared with the control ones. **Conclusions.** Approbation of the developed technique of motor activity of pre-schoolers with the introduction of Ukrainian folk fun and play in the practice of physical education in pre-school educational institutions has shown great effectiveness, is confirmed by an increase in the level of physical fitness of children in the experimental groups.

Key words: pre-schoolers, pre-school educational institution, motor activity, folk fun and play.

Анатолій Вольчинський, Ярослав Смаль, Олександр Малімон, Андрій Ковальчук, Ольга Рода. Організаційно-методичні основи фізичної активності дітей дошкільного віку. *Актуальність дослідження* зумовлена тим, що на етапі сьогодення спостерігається неналежний стан здоров'я дітей, слабку фізичну підготовленість, що зумовлені низьким рівнем рухової активності. Із метою розв'язання цієї проблеми проводиться активний пошук способів удосконалення фізичного виховання в дошкільних навчальних закладах. Діти дошкільного віку мають біологічну потребу в рухах, вони отримують насолоду від процесу рухової активності, який потрібно наповнювати різноманітними фізичними вправами й іграми. Позитивні емоції, зацікавленість і задоволення, які викликають у дітей під час рухливої гри, поступово переходять у звичку систематично займатися фізичною культурою. **Мета статті** полягає в теоретичному обґрунтуванні й експериментальній перевірці результативності рухової активності дітей старшого дошкільного віку з використанням українських народних ігор та забав. **Методи** – аналіз науково-методичної літератури, тестування дітей старшого дошкільного віку, педагогічний експеримент. **Результати.** Правильна організація заняття з фізичного виховання дітей у дошкільному навчальному закладі забезпечує активізацію їхньої рухової активності, необхідну для поліпшення фізичного стану дитини і її психіки протягом дня. Розроблена нами методика включала українські народні ігри та забави на заняттях фізичного виховання й прогулянках. У структурі рухової активності дітей передбачено чергування ігор різної інтенсивності та спрямованості. Дані експерименту засвідчили, що в експериментальних групах дітей 5 - і 6-ти років протягом експерименту значно зросла якість виконання тестових завдань, порівняно з контрольними. **Висновки.** Апробація розробленої методики рухової активності дітей старшого дошкільного віку із використанням українських народних ігор і забав у практиці фізичного виховання дошкільних навчальних закладів показала

її ефективність, що підтверджено підвищенням рівня фізичної підготовленості дітей експериментальної групи за всіма фізичними якостями.

Ключові слова: діти старшого дошкільного віку, дошкільний навчальний заклад, рухова активність, народні ігри, забави.

Анатолій Вольчинський, Ярослав Смаль, Александр Малимон, Андрей Ковальчук, Ольга Рода.
Организационно-методические основы физической активности детей дошкольного возраста.
Актуальность исследования обусловлена тем, что на настоящем этапе наблюдается ненадлежащее состояние здоровья детей, слабая физическая подготовленность, обусловленные низким уровнем двигательной активности. С целью решения этой проблемы ведется активный поиск путей совершенствования физического воспитания в дошкольных учебных заведениях. Дети дошкольного возраста имеют биологическую потребность в движениях, они получают удовольствие от процесса двигательной активности, который необходимо наполнять различными физическими упражнениями и играми. Положительные эмоции, интерес и удовольствие, которые вызывают у детей во время подвижной игры, постепенно переходят в привычку систематически заниматься физической культурой. **Цель статьи** – теоретическое обоснование и экспериментальная проверка результативности двигательной активности детей старшего дошкольного возраста с использованием украинских народных игр и забав. **Методы** – анализ научно-методической литературы, тестирование детей старшего дошкольного возраста, педагогический эксперимент. **Результаты.** Правильная организация занятия по физическому воспитанию детей в дошкольном учебном заведении обеспечивает активизацию их двигательной активности, необходимую для улучшения физического состояния ребенка и его психики в течение дня. Разработанная нами методика включала украинские народные игры и забавы на занятиях физического воспитания и прогулках. В структуре двигательной активности детей предполагалось чередование игр различной интенсивности и направленности. Данные эксперимента показали, что в экспериментальных группах детей 5- и 6-ти лет в течение эксперимента значительно возросло качество выполнения тестовых заданий, по сравнению с контрольными. **Выводы.** Апробация разработанной методики двигательной активности детей старшего дошкольного возраста с использованием украинских народных игр и забав в практике физического воспитания дошкольных учебных заведений показала ее эффективность, что подтверждается повышением уровня физической подготовленности детей экспериментальной группы по всем физическим качествам.

Ключевые слова: дети старшего дошкольного возраста, дошкольное учебное заведение, двигательная активность, народные игры, забавы.

Introduction. Physical activity at a preschool age acts is a necessary condition of the formation of the basic structures and functions of the human body. With a decrease in motor activity, the muscular apparatus and respiratory system work without sufficient load, do not undergo systematic training, which, even with insignificant physical effort, may cause a substantial disorder of their functions. Physical activity of preschool children is determined not only by the biological need but also by the pedagogical influence on the children. The need of a child in motor activity can be suppressed or on the contrary, stimulated by motor activity, in particular in a preschool institution [4].

Numerous research [2; 5; 6] proves that properly organized physical education of children contributes to the formation of both bone and muscular systems and, as a result, forms the morphology and motor functions of the child, which is the content of the physical development of the body.

An important component of the development of the of childrens of the senior preschool age is the formation of the correct posture. E. S. Vilchkovskiy [1] notes that the posture of the child is formed by the growth of the body. Therefore, care should be taken beforehand to prevent the occurrence of various physical abnormalities associated with impaired posture.

The purpose of the research is to provide theoretical substantiation and experimental verification of the performance of childrens motor activity the senior preschool age with the use of Ukrainian folk games and fun activities.

Organization and methods of research. Pre-school educational institutions No. 11 and No. 18 of Lutsk City Council became the experimental base of the study. In research and development activity, 120 children of senior preschool age took part. A number of tests were used to reveal the physical qualities, running with a maximum speed of 30 m (sec); standing jump (cm); throwing a tennis ball at the target (points); hanging on bent hands (sec); slope forward from a sitting position (cm).

Research results. To determine the motor activity of children, we used the electronic step-by-step gauges OMRON CaloriScan 306 Gold .The device is attached to the belt. The number of steps and the length of the distance were fixed. The error was 10 %, which is permissible. The results of the research of motor activity of 5-6 year old children are given in table 1.

The average indicators of motor activity of children 5-6 year olds during the day

Age, years	Gender	Indexes	
		Steps	Meters
5	boys	6873,5	3917,9
	girls	6783,2	3866,4
6	boys	6945,8	4098,0
	girls	6859,0	4046,8

The results obtained indicate that children during the day make 6783.2-6945.8 steps, which corresponds to 3866.4-4098.0 meters. Boys have a somewhat higher motor activity (at the age of 5 years - 90 steps (1.33 %), at the age of 6 years - 86 steps (1.27 %)). However, this difference is negligible. Therefore, it can be argued that the total number of locomotions of boys and girls aged 5-6 years is in the same range.

No significant increase in the physical activity of children aged 5 to 6 years was detected. The boys' number of steps increases by 1.05 %, the girls' - by 1.12 %. However, the distance covered by boys is increased by 4,59 %, in girls - by 4,67 %. This tendency is caused by an increase in the length of the step of children by 2-3 cm.

For normal functioning of the human body, a certain "dose" of motor activity is required. Volumes of motor activity depend on physiological, social and cultural factors, age, gender, physical preparedness, lifestyle, climatic conditions, and other factors. Determination of rational norms of motor activity depends on individual potential of a person.

The rational standard of motor activity is understood as the volume, providing for health promotion and enhancement of physical abilities of a person. The rational level of motor activity promotes health care, improvement of mental and physical development of children only on condition of regular and systematic exercise in physical education [4].

According to T. Krutsevich [3], the hygienic norm is the quantity of motor activity that fully satisfies the biological need for movement, corresponds to the functional capabilities of the body and promote the health of children and their harmonious development.

The analysis of the functional needs of the child's body according to the season, E.S. Vilchkovskiy [1] suggests the norms of physical activity during children's studying in the pre-school educational institution: summer – 18-20, autumn – 15-19, in winter – 16,5-18 and spring – 16-17,5 thousand steps.

Comparison of the individual results with the norms of motor activity for 5-6 year old children testifies to very low rates of motion of the respondents. On the average, in the volume of locomotion, children lag behind hygiene standards by 130.4% -136.6%. This situation leads to the need to study the ways of increasing physical activity of children in preschool educational institutions. In the pedagogical experiment the Ukrainian folk games were widely used. Students of the control group were trained according to the curriculum called "The Child".

Initially, the experiment included simple games based on the simple and natural movements, with a simple organization, without a split into teams, later the experiment became more complex and required special training (jumping, throwing, climbing skills).

The high intensity games were conducted during Physical education classes. The lesson consisted of 3-4 folk games and followed such a principle: the first game – with the average mobility, providing a gradual increase in physical activity; the next games retained a high level of mobility, and ended up playing a game of low mobility. Each game was repeated 3-5 times. In the walks, we conducted games of medium intensity, with which the children had already become acquainted at the lessons of physical education.

Testing the results of children of 5-6 year old children (at the beginning of the experiment) indicated that the physical preparation of preschoolers of the experimental and the control groups did not differ.

However, at the end of the experiment, the test revealed the difference in results (Table 2). For example, the results of the run of 30 m in experimental groups of 5-year-old children increased by 0.3 sec for boys and 0.6 sec for girls. As for children of the control groups the results were 0.3 sec with boys and

0.4 sec with girls. With the 6-year-old boys of the experimental group, the results increased by 1.2 sec, with the girls – by 1.0 sec. In the control group 0.2 sec and 0.3 sec.

In the long jump the experimental groups for children aged 5 result increased by 13.5 cm with boys, girls - 8.6 cm, while control groups - 8.9 cm and 3.8 cm. 6 years old children of experimental groups: boys – 18.9 cm, girls - 13.4 cm; control groups - 9.8 cm and 8.9 cm.

Table 2

Level of development of speed-force qualities of children of experimental and control groups during a pedagogical experiment, ($\bar{X} \pm Sx$)

Age	Groups	Gender	At the beginning of the experiment	At the end of the experiment	Growth	P
Run 30 m, s						
5	E	B	7,6±0,06	7,3(0,06)	0,3	<0,05
		G	8,8(0,1)	8,2(0,1)	0,6	<0,001
	C	B	8,5(0,07)	8,2(0,12)	0,3	<0,05
		G	8,7±0,11	8,3±0,1	0,4	<0,05
6	E	B	7,8±0,08	6,6±0,1	1,1	<0,001
		G	8,2±0,06	7,2±0,06	1,0	<0,001
	C	B	7,9±0,06	7,7±0,09	0,3	<0,05
		G	8,0±0,09	7,7±0,07	0,3	<0,05
Standing jump, cm						
5	E	B	75,4±1,85	88,9±1,29	13,5	<0,001
		G	73,7±1,85	82,3±1,67	8,6	<0,001
	C	B	74,7±1,65	83,6±1,70	8,9	<0,001
		G	73,6±1,53	77,4±1,43	3,8	>0,05
6	E	B	89,1±1,43	108,7±1,24	18,9	<0,001
		G	83,7±1,25	97,1±1,17	13,4	<0,001
	C	B	83,7±1,64	93,5±1,10	9,8	<0,001
		G	74,2±1,68	83,1±1,19	8,9	<0,001
Throwing the ball at the target, points						
5	E	B	4,3±0,13	4,8±0,09	0,5	<0,001
		G	4,2±0,15	4,8±0,2	0,6	<0,001
	C	B	3,7±0,11	3,9±0,09	0,2	>0,05
		G	3,8±0,08	4,0±0,14	0,2	>0,05
6	E	B	4,2±0,07	4,6±0,05	0,4	<0,001
		G	4,3±0,08	4,9(0,07)	0,6	<0,001
	C	B	3,6(0,09)	3,9(0,11)	0,3	<0,05
		G	3,7(0,1)	3,8(0,07)	0,1	>0,05

E – experimental group, C – control group, B – boys, G – girls.

The increase in the results of the standing jumps occurred as a result of improving the techniques of jumping, as well as the growth of leg muscle strength, which can be explained by the positive influence of the method we proposed.

Testing of dexterity indicates a gradual improvement in every next group. In 5-year-old children of the experimental groups, the growth of results of boys is 0.5 points, of girls - 0.6 points; control groups of boys and girls - 0.2 points. Consequently, children of experimental groups performed throwing at a target better than the children of control group. This is due to their higher level of practice in playing popular games.

The data of 5 year old children's testing force endurance indicate an improvement of their results in experimental groups: boys – 3,6sec, girls – 3,1sec; boys improved result in control groups for 1,1sec, girls for 0,7 sec. 6 years children had these changes higher in experimental groups: boys – 5,3sec, girls – 3,2 sec. In the control groups the improvement in results was negligible: boys – 1,4, girls – 0,7 s (table 3). Therefore,

survey data of the static endurance in the process of the experiment point to the fact that the results of children in the experimental groups increased drastically.

Data analysis of 5 year old children’s measurement of flexibility shows that boys have 4.0 cm in their increase and girls have 3.4 cm in the experimental groups. In the control groups the increase is as follows: boys – 1.7 cm, and girls –1,3 cm. 6 year old children’s results increased by 3.4 cm (boys) and 3.7 cm (girls) in experimental groups, by 2.0 cm (boys) and 2.1 cm (girls) in control groups.

In our opinion, the top results of certain physical qualities depend on the nature of the exercises and games offered to children. If the teachers suggested exercises to develop flexibility (played outdoor games involving tilting, throwing, etc.), accordingly, the children’s results of the development of this quality would be better.

Thus, the obtained results indicate that the widespread use of folk outdoor games in the system of physical education of senior preschool children (during physical training and outing) has made a positive impact on an all-round development of physical fitness of children in the experimental groups in comparison with the control ones.

Table 3

The level of development of the children’s power endurance and flexibility in the experimental and control groups during the pedagogical experiment, ($\bar{x} \pm s x$)

Age, years	Groups	Gender	At the beginning of the experiment	At the end of the experiment	The increase of the results	P
Hanging on the bar with the bent arms, sec						
5	E	B	25,1±1,28	28,7±1,33	3,6	<0,05
		G	20,2±1,22	23,3±1,26	3,1	<0,05
	C	B	21,2±1,34	22,3±1,42	1,1	>0,05
		G	20,0±1,18	20,7±1,37	0,7	>0,05
6	E	B	29,4±1,27	34,7±1,16	5,3	<0,05
		G	24,2±1,21	27,4±1,18	3,2	<0,05
	C	B	27,5±1,52	28,9±1,02	1,4	>0,05
		G	20,1±1,47	21,1±1,54	1,0	>0,05
Tilt forward, cm						
5	E	B	2,7±0,17	6,7±0,17	4,0	<0,001
		G	2,1±0,26	5,5±0,16	3,4	<0,001
	C	B	1,4±0,14	3,1±0,34	1,7	<0,001
		G	2,1±0,24	3,4±0,28	1,3	<0,001
6	E	B	2,3±0,23	5,7±0,13	3,4	<0,001
		G	2,1±0,31	5,8±0,11	3,7	<0,001
	C	B	2,1±0,25	4,1±0,14	2,0	<0,001
		G	2,7±0,34	4,8±0,35	2,1	<0,001

Discussion. The scientists and experts say that children’s physical activity has decreased significantly in recent years. Our researches confirm this problem. One reason for this phenomenon is the computer and mobile communication captivating not only the adults and schoolchildren, but also children of preschool age, which reduces their motion. The use of efficient means of organization and contents of pedagogical process in preschool institutions will improve the situation.

In our opinion, some of these means are popular outdoor games and fun activities. Wide use of these pedagogical tools in modern life will contribute to the effective succeeding in the tasks of spiritual and physical improvement of the child's individuality.

Conclusions and prospects for further research. Scientists and experts have concluded the inappropriate state of children's health, poor physical fitness, caused by low levels of physical activity. To solve this problem, an active search of ways of improvement of physical education in preschool educational institutions must be conducted. Teachers ensure various activities to raise the standard of the children’s physical activity and to improve physical condition of the child and his or her psyche during the day. An interest in folk physical exercise is growing. Therefore, to improve the physical activity of preschool children in educational institutions, we used folk outdoor games and fun activities during the classroom physical education and outings. An approbation of the developed methodology showed its effectiveness, which is

confirmed by a significant increase in the level of physical fitness of children in the experimental group in terms of all physical indicators.

Further research will be focused on the methodology of preschool age children's motion activity using a variety of folk outdoor games in the educational process of other educational institutions in Lutsk.

References

1. Vilchkovskiy, E. S. & Kurok, O. I. (2008). *Teoriia i metodyka fizychnoho vykhovannia ditei doshkilnoho viku* [2-e vydan., pererob. ta dopov.] [Theory and methodology of physical education of preschool-age children]. Sumy: VTD Universytetska knyha, 428.
2. Volchynskiy, A. Ya., Volchynska, N. & Smal, Ya. (2013). Vplyv hry na pidvyshchennia rukhovoï aktyvnosti doshkilnykiv [Influence of a game on increasing of motor activity of preschoolers]. *Fizychni vykhovannia, sport i kultura zdorovia u suchasnomu suspilstvi: zb. nauk. pr. SNU imeni Lesi Ukrainky*, no. 1 (21), 144–148.
3. Krutsevych, T. Yu. & Panhelova, N. Ye. (2013). Zmist i zasoby prohramy intehrovanoho rozvytku rukhovyykh ta moralnykh yakosti ditei starshoho doshkilnoho viku v protsesi fizychnoho vykhovannia [Maintenance and facilities of the program of integrated development of motive and moral qualities of children of senior preschool age in the process of physical education]. *Fizychni vykhovannia, sport i kultura zdorovia u suchasnomu suspilstvi*, no. 3, 157–162.
4. Panhelova, N. & Doroshenko, I. (2012). Orhanizovana rukhova aktyvnist yak providnyi typ diialnosti u formuvanni moralnykh yakosti osobystosti doshkilnykiv 5–6 rokiv [Motive activity as the leading type of activity in moral qualities forming of preschoolers of 5–6 years]. *Sportyvnyi visnyk Prydniprovia*, no. 1, 19–22.
5. Petrenko, H. V. (2013). Suchasni tekhnolohii u zdorovia oriantovanomu fizychnomu vykhovanni ditei starshoho doshkilnoho viku [Modern technologies in the health-oriented physical education of preschool aged children]. *Nauka i osvita. Serii: Pedagogika: teoriia i metodyka fizychnoho vykhovannia*, no.4, 169–171.
6. Tsos, A. V., Khomych, A., Soroka, A. and etc. (2018). *Sotsialno-pedahohichni ta medyko-biolohichni osnovy fizychnoi aktyvnosti riznykh hrup naselennia: kolektyv. monohrafiia* [Socio-pedagogical and medicobiological foundations of physical activity in various population groups]. Lutsk: Vezha-Druk, 309.

Received: 01.03.2018