IDENTIFICATION OF THE IMPACT OF USING SPORTS GAMES' ELEMENTS ON THE DEVELOPMENT OF MOTORIC QUALITIES IN STUDENTS OF EXERCISE THERAPY GROUP

Kudelko V.E., Ulayeva L.O., Kravchenko O.S.
Kharkov National Economic University

Annotation. The influence of sports on the development of motor qualities of students is researched. The study involved two groups of students by 12 people with various illnesses. They were asked to perform a set of exercises to develop their motoric qualities. The results of students' physical qualities testing before and after the teaching experiment are illustrated. The considerable improvement of the testing results after applying the set of exercises with elements of sports games for the motoric qualities development was marked. The results of the experiment confirmed that the level of students' physical fitness was increased and the development of the basic physical qualities: speed, dexterity and speed-force qualities was accelerated to the extent possible. To improve the working capacity of students who have limited physical activity it is necessary to use special means of physical education.
Keywords: motoric, qualities, sport games, physical fitness.

Introduction

In modern society, physical education plays an important role in strengthening the physical, psychological and moral health of students. In the system of means and methods of physical education every year a great place is lead to practical classes, which contain specially selected exercise and instructional techniques to enhance the overall health and harmonious physical development and improvement of motor abilities of students [3, 7, 9].

Problems of development of human motor skills can be viewed in the works of Boyko V.V. (1987), Romanenko V.L. (1999), Holovchenko O.I. (2009), but there is not enough information about the development of these abilities in people who have limited physical activity, and they are students of exercise therapy. Practice shows that in higher education establishment studied much of students with weak health who have chronic disease of cardiovascular, respiratory and other body systems, disorders of the musculoskeletal system. These students have low levels of physical fitness and require special attention to the development of personal physical properties (strength, speed, power, coordination, etc.) that in combination determine overall physical performance, much needed for future highly skilled [6, 10].

Development of motor function in people of all ages can take place continuously, but not uniformly. In early adulthood (up to 16-18 years) motor skills can develop very rapidly [12], but in later life development slows. Active motor activity promotes faster, and most importantly – more harmonious maturation of morphological structures and functional systems that provide specific motor actions. With the help of exercise and sports it is possible actively influence the age of motor skills, to correct deviations from the normal course of development [2, 4].

To ensure the effectiveness of the process of students' physical education, research work was conducted to identify the impact of the use of elements of sports games on the development of motor skills of students of exercise therapy.

The work is done according to the research plan of Kharkiv National Economic University.

Purpose, tasks of the paper, material and methods

Purpose of research – to find a set of special exercises with elements of sports for students with limited physical activity.

Tasks – using the test results of two groups of students in 12 people with various diseases aged 18-19 years, to egalitarian analysis before and after the teaching experiment. Identify the impact of the use of elements of sports games on the development of motor skills of students of exercise therapy.

Organization of research.

Research involved two groups of students in 12 people with various diseases of the exercise therapy department. The first phase of the experiment both groups were asked to perform three test exercises: movement to gymnastic stick in pairs (number of times - for 30 sec.); transfer medicine ball (2kg) in triples (number of times – for 30 sec.); transfer volleyball ball on the wall with the movement in triples (number of times – for 30 sec.). Then, for three months in the control group sessions were conducted exercise in the usual way on strengthening overall health. The students of experimental group, in order to improve development of motor skills: speed, agility and speed-strength performed a set of special exercises with elements of sports (Table 1).

Results.

Analysis of literature and preliminary pedagogical research showed that the display of such qualities as speed, has several areas: speed of motor or behavioral responses, speed of thought, speed of action. Speed qualities improved during the course of gaming exercises and are also useful starts from different initial positions. Power-speed qualities developed through outdoor games and competitions, taking it to the 50% of the total time occupation. Agility exercises to improve with fast changing situations that require accuracy, speed and coordination. For development of

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dexterity is useful exercise with big balls (transmission, transfer, catching, etc.), it is useful to use games that encourage students to move from one activity to another according to changing circumstances [1, 5].

Table 1

Complex of special exercises for development of motor skills at students of exercise therapy

	Description	Dosage	Notification on instructions
1	Beginning position - hands apart at shoulder level. Free rotational motion with one hand clockwise, another - in the opposite direction.	6-8 times.	Hands are equal.
2	The right hand describes a circle in front of body, left - the vertical line.	6-8 times.	Hands are equal.
3	Two students standing with gymnastic sticks at the ends of the line in front of each other. At the command one should take the stick of a partner.	Distance 3 m, 6-8 times, 6-8 series.	Signal is given by one of the students.
4	Hold basketball balls on straight arms, then on one hand (at the top of the ball, the ball is in front).	5-10 sec, 2-3 repetition	Hands are equal.
5	Rotation of basketball balls around the body (around the knees, around one leg, around feet describing a figure eight, around the neck)	4-6 times, 1-2 series.	Do not look at the ball.
6	Handing basketball ball in various ways (both hands on the chest, with both hands at the bottom, two hands of the head).	Distance 3-3,5 m, 6-8 handings, 2-3 series.	The ball is handing with various force.
7	Handing the ball in the circle in different ways (each one, through one, two balls clockwise and against).	1-2 series for 40-50 sec.	The ball is handing with max. speed.
8	Two teams stand in ranks within 18 m in front of each other, the signal at the same time begin to move on a distance of 6 m, touch the line and returned back to their original beginning position (Beginning position: standing, sitting, backward).	3-4 series.	Moving walking trails.
9	Handing a ball in pairs with two hands from the chest moving walking trails.	5-6 handings, 2-4 repetition.	At a middle pace.
10	In pairs, in the beginning position standing next to each other at handing basketball balls to each other with rebound from the wall.	Distance 1-2 m, 6-8 times, 1-2 series.	The ball is handing on various high.
11	Three students standing in line. 1 and 3 pass the ball at the height of the shoulder of student that is between them. During the flight, he kneels and rotates 180 ° so that at the time of transfer the ball did not touch him.	Distance 2,5-3 m, 6-8 handings, 2 series.	The ball is handing on various pace.
12	Three students standing in line. Student 1 handing the student 2, he turns around and passes the ball for student 3. After receiving the ball from student 3, he comes back around and passes the ball student 1.	Distance 2 m, 5-6 times, 2 series.	The ball is handing on various pace.
13	Student 1st (goalkeeper) is in 2 m away from the wall, his back to it. Students 2nd and 3rd take turns rolling the ball into the wall. Student 1st, at the time of the throw back to the wall, trying to catch a ball that bounced off the wall and catching it passes whom he was throwing.	5-6 times, 1-2 series.	The ball is handing on various high.
14	Three students stand at the corners of an imaginary triangle at a distance of 3 m. Each has ball. At the command, all starting at the same time to pass the ball to each other clockwise (or vice versa).	5-6 times, 1-2 series.	The ball is handing on various level of chest.

In the third stage of the experiment the students of both groups of exercise therapy again completed three test exercise.

Table 2

Results of control tests

Test	Results before experiment		Results after experiment	
	Experimental group	Control group	Experimental group	Control group
Gymnastic movement to stick in pairs.	9,12	9,25	13,37	10,75
handing medicine ball in three.	26	27	32	28

Handing of volleyball ball on the wall in three.	18,1	20,3	26,4	22,8

The results that were obtained during this study are listed in Table 2. The students, who were in the experimental group significantly improved their results, particularly in the exercises "gymnastic movement to stick in pairs" and "handing of volleyball ball on the wall", where the number of movements increased by 4,25 times, and number of transfer for 8, 3 times. Improved results are in the second group, but significantly lower: gymnastic movement to stick is more to 1,5 times; handing medicine ball at 1 time; handing of volleyball ball on the wall is more than 2,5 times.

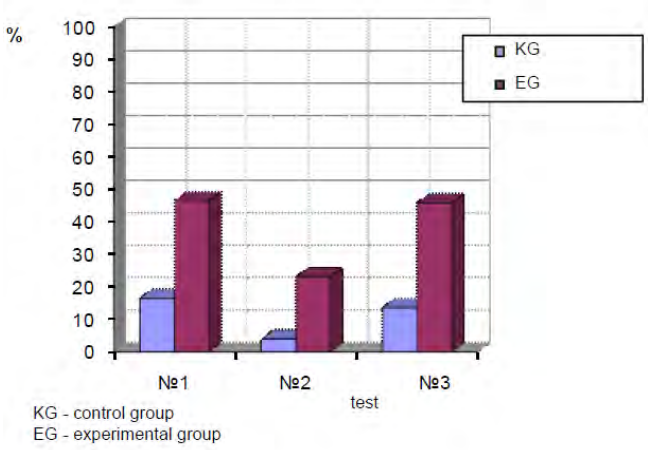

Fig. 1. The dynamics of increasing a test results after the experiment.

Comparing the dynamics of the first, second and third tests of students as a percentage we obtained the following results. Thus, the growth of results after test number 1 (speed) in the control group was 16,5% and in the experimental 46,6%. Test number 2 (power-speed skills) showed growth of results on 3,9% in the control group and 23,1% in the experimental group. After the test number 3 (dexterity) the results of students of control group increased by 13,7% and by 45,9% in the experimental group (Fig. 1).

Conclusions.

The system of physical education means involves the implementation of the principle of all-round development of the individual, including integrated development of all motor skills, but if students have limited physical activity, it requires special attention to the use of these means.

Picked a set of special exercises with elements of sports has a positive effect on the development of motor skills in students with limited physical activity.

Experimentally confirmed increase of level of basic physical qualities (speed, dexterity and speed-strength) influenced the use of compound exercises with elements of sports.

Use exercises with elements of sports helped students of exercise therapy not only continue to develop movement of the body, but also improve their overall health, increase physical performance and emotional interest in the occupation.

Further research is planned to determine the direction of the strength and endurance of students with limited physical activity.

References:

1 Antonik V. I., Antonik I. P., Andrianov V. Y. *Anatomiya, fiziolohiya ditey z osnovamy hihiyeny ta fizychnoyi kul'tury* [Anatomy, physiology of children with bases of hygiene and physical culture], Kiev, Professional Publ. House, 2009, 336 p.

2 Boyko V. V. *Tselenapravlennoe razvytye dvyhatel'nykh sposobnostey cheloveka* [Purposeful development of motive capabilities of a man], Moscow, Physical culture and sport, 1987, 143 p.

3 Volkov V.M. *Teoriya i praktyka fizychnoyi kul'tury* [Theory and practice of physical culture], 1993, vol.5, pp.41-45.

4 Holovchenko O.I. *Teoriya ta metodyka fizychnoho vykhovannya* [Theory and method of physical education], 2009, vol. 2, pp.15-18.

5 Huzhalovs'kyy A. A. *Rozvytok rukhovykh yakostey u shkolyariv* [Development of motive qualities for schoolchildren], Minsk, Folk education, 1987, 88 p.

6 Zhvavo V. V. *Tsilespryamovanyy rozvytok rukhovykh zdibnostey lyudyny* [Purposeful development of motive capabilities of a man], Moscow, Physical culture and sport, 1987, 208 p.

7 Korenberh V. B. *Teoriya i praktyka fizychnoyi kul'tury* [Theory and practice of physical culture], 1996, vol.7, pp. 2-5.
8 Kudelko V. E., Ulayeva L. O., Shevchenko O. O. *Pedahohika, psykholohiya ta medyko-biolohichni problemy fizychnoho vykhovannya i sportu* [Pedagogics, psychology and mediko-biologichni problems of physical education and sport], 2011, vol. 7, pp.49-53.
9 Matveev A. P. *Metodyka fyzycheskoho vospytanyya v nachal'noy shkole* [A method of physical education at initial school]. Moscow, Vlados-Press, 2003, 248 p.
10 Romanenko V. L. *Dvigatel'nye sposobnosti cheloveka* [Motive capabilities of a man], Donetsk, UKR, 1999, pp. 267-277.
11 Ulayeva L.O., Sobko I.M. *Metodychni rekomendatsiyi shchodo rozvytku rukhovykh yakostey z navchal'noyi dystsypliny «Fizychne vykhovannya» dlya studentiv* [Methodical recommendations in relation to development of motive qualities from educational discipline «Physical education» for students], Kharkov, KHNEU, 2010, 32 p.
12 Robert M. Malina. Motor Development during Infancy and Early Childhood: Overview and Suggested Direction for Research. *International Journal of Sport and Health Science*, 2004, vol.2, pp. 50-66.
13 Norgaard K. Traditional Games As New Games: Towards An Educational Philosophy Of Play. *Sport, Ethics and Philosophy*, 2009, vol. 2(13), pp. 253–273.

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Information about the authors

Kudelko V. E.: vikikudelko@mail.ru; Kharkov National Economic University; Lenina boulevard 9a, 61001, Kharkov, Ukraine.
Ulaeva L. A.: vikikudelko@mail.ru; Kharkov National Economic University; Lenina boulevard 9a, 61001, Kharkov, Ukraine.
Kravchenko E. S.: vikikudelko@mail.ru; Kharkov National Economic University; Lenina boulevard 9a, 61001, Kharkov, Ukraine.

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