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Methodological Features Physical Preparation of Students Handball Players

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ABSTRACT

The article explores the process of physical and technical training of students-mostly means gandbolistok mobile games. The problems of development of physical fitness handball players and the impact of mobile games on the effectiveness of physical fitness. Physical fitness is one of the most important types of training handball players. The training process must take into account the importance of the leading basic and special physical qualities. It is necessary to devote more time to the development and improvement of the most important qualities - the leading core and leading special physical qualities. This article analyzes the results of the testing of physical fitness of students - handball players, determined the effectiveness of the impact of mobile games on the physical quality of training students - handball players and shows the effectiveness of training sessions in the preparatory period.

KEYWORDS
Handball players, physical preparation, methodology of physical preparation

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Introduction

Handball - sports game, which is characterized by situational outside the box to change the terms with the absence of stereotyped repetition of situations and in performing the movements. High emotional stress of athletes associated with the degree of surprise the opponent, which is accompanied by physiological transformations in the body, caused by a type of stress reactions. Continuously changing game situations in handball, in constant confrontation with the rival places high demands on the skill of the athletes and to the full range of factors determining and limiting the effectiveness of activities, all the above factors are very close to the outdoor games.

Specificity sports game handball requires between competitive activity of athletes display a high level of coordination skills, balance function, a game of dexterity, speed and power abilities, which depend on the level of functionality, physical properties (general and specific), technical and tactical and psychological preparedness. The level of development of any of these factors can be critical to achieving the overall victory, high level of development of coordination abilities, games of skill and physical qualities of a functional base,

which should improve the technical and tactical and psychological preparedness of the parties.

The physical qualities must be developed in a timely and comprehensive manner. The physical quality of movement are associated with manifestations of typological features of nervous system properties, which act in the structure of the qualities of natural instincts, is based on the physical preparation of students should be put science-based training methodology and management of the development of natural reserves of athletes. As part of the training process in their chosen sport specialization of one of the tasks in the sports training of students is to master the motor skills that underlie the development of physical qualities.

Feature of athletic training students engaged in handball, the university is the duration of the development of movement techniques, due to the complexity of the technical elements of the game chosen sport and the level of physical fitness, this situation requires a coach and instructor during the training time in college to explore more effective in the training process means of physical culture, including the least developed areas, causing concern about the effectiveness of their impact - is the use of mobile games.

The content of mobile games and game exercises, to be used in sports, and in particular in handball, to provide targeted exposure to the development of special physical qualities, providing speed and accuracy of the rebuilding of motor actions, the ability to accurately differentiate the space, power and timing of movements, a sense of rhythm, especially coordination abilities, allowing to navigate in space (Filin & Fomin, 1980; Bal'sevich, 1990; Bril, 1980; Zheleznjak, 1988).

Outdoor games in the handball lessons are the most effective means of diversifying physical education students. The main feature of mobile games is that they are peculiar to the students, they accepted them with joy, held with great commitment and energy at a high emotional level. All this reveals to the teacher limitless initiative management capabilities of students, education will to achieve specific goals (Nasiyev et al., 2016).

The most salient point mobile games - it is a struggle for the victory of the participants, and the mere desire to win is the need to improve the technique and tactics (Imangulova et al., 2016a). In addition, participation in the games requires a certain physical fitness of students. Cleverly combining mobile games with other exercises and assignments, the teacher is seeking more conscious attitude of students to handball. In teaching practice used two basic types of self-moving games: collective and individual (singles). An important place in the training take collective game. Some authors (Ljah, 1976; Fomin, 1985), based on the characteristics of the motor games content subdivided them relatively calm, with the overall effect on the body and associated with the "mechanical movements of the body".

The content of various motor actions in mobile games include walking, running, jumping, climbing, throwing at a target and other movements which develop physical qualities, such as: speed, agility, endurance, strength, flexibility, coordination (Imangulova et al., 2016b).

Any coach-teachers who are creative approach to the planning of the educational process, always involves the preparation of young handball players of mobile games (Karpman, 1987a).

Analysis of scientific and methodical literature convinces us that to solve the problem of a technique of use of mobile games in the handball needed evidence-based research on their use for the development and improvement of the potential of natural reserves in terms of university studies (Alekseev & Asknazin, 1970).

Studies on the effect of mobile games in the sports activities of students of various specializations in the period of study in high school and to improve their professional sportsmanship significantly limited, which requires urgent information on methodological features of the use of their training process (Karpman, 1987b).

The problem of organizing sports activities at the institute with students handball associated with the presentation of the body to systems high demands associated with the achievement of high technical and technological skills. Playing handball entail a speed-strength abilities in very short periods of time. Athlete it requires a high level of physical qualities, the achievement of which require scientific and methodological studies, starting with the initial training period to the high sportsmanship (Lesbekova et al., 2016).

Technique training in handball includes the testing of the necessary technical - tactical skills, differentiated development of special physical abilities relevant for the conduct of the game, to achieve the desired result depends on the use of training funds and individual reserves student body.

Using the generally established forms of organization of pedagogical training sessions handball quite quickly become familiar and involved in the adaptation of the body comes to the conditions of the activities that should be considered in the training of students of different levels of training.

It is necessary to vary the conditions of training, trying regularly to set conditions for dealing with students, requiring athletes display, ability to game action (Matveev, 1977).

One of the most significant and least developed problems is the rational justification for the valuation exercise and motor mode for students. Respect for the individual load adequacy requires strict differentiation of the load, depending on sex and age, level of physical development of girls sports qualification involves concepts (Holodov & Kuznecov, 2000).

Optimal effect on the development of physical qualities of athletes may have only scientifically sound level of motor activity that is able to increase the adaptive capacity of the body and create a basis for improving endurance and high performance in handball.

Large exercise with multiple repetitions of exercise cause fatigue in athletes, the state is a natural reaction to the monotonous load carried, decreased interest in further studies. The inclusion of training in handball outdoor games, conducting exercises with the game methods should strengthen attention to improve the emotional state of the students involved in sports and have a positive influence on the health recovery. Change of activity is the effect of "active rest", associated with the phenomenon of induction of excitation and

inhibition of various muscle nerve cells, making them more functional state. The effectiveness and appropriateness of the use of mobile games in the sports training of athletes has scientific theoretical foundations.

The analysis of these studies of scientific and methodical literature on the problem of physical fitness of students. engaged in handball. in a year cycle of preparation. who discovered the lack of study of the problem of the influence of mobile games on the effectiveness of physical fitness (Ignat'eva, 1983).

Analysis of the literature showed. that does not fully use possibilities of mobile gaming as a means of general and specialized sports training. It is not enough researched and developed educational technology impacts on the dynamics of mobile games and physical abilities are not assessed the effectiveness of mobile games in the training of handball players during training at the university.

Methodology

The leading idea. It is necessary to develop and explore the use of complexes of mobile games with multidirectional advantageous effect on the body of students - handball players. which should ensure the effectiveness of training and promotion of the growth rate of general and special physical ability.

The hypothesis of the study. The methodology of the training sessions through the use of a set of special designed mobile games and exercises with individualized differentiated volumes and intensity loading performed by students of handball, should lead to the optimization of performance of their motor abilities. Application of a game method with a rational construction of training based on a differentiated approach to the training of students-handball players will increase their level of physical fitness and special (Burkashev et al., 1988).

The object of study - the process of physical and technical training of students-mostly handball students means of moving games during the school year.

Subject of study - especially the effect of the use of mobile games students who are engaged in sports handball group to their physical and technical side of training.

The purpose of research - to determine the effectiveness of the impact of mobile games on the physical quality of training students - handball players to refine their methodological features used in handball.

To achieve this goal in the scientific work of the following tasks:

1 Post analysis of the research literature on the effects of outdoor games on the development of physical qualities of students. engaged in handball.

2 To investigate the influence of mobile games on the effectiveness of physical preparation of students - handball players.

3 Post a comparative analysis of the peculiarities of the development of general and special physical training of students of handball players and give recommendations on how to conduct physical and technical preparedness.

Methods: analysis and generalization of scientific and methodical literature, pedagogical experiment, statistical and mathematical data processing with the definition of X, S, p.

In the experiment, was attended by 9 female students included in the team of the sports club. The study involved handball at the age of 17 -19 years. The group used mobile games in the preliminary or main part of the workout. In-house studies have been conducted on young handball. having a world-class athlete, MS, CCM.

During the month, four times - at the beginning of the experiment, at 10. 20 and 30 days recorded performance: running 30 meters with and without the knowledge of the ball; passing the ball into the goal. As a target used shield 40x40 cm. Suspended from the upper corners of the gate. It was suggested that for 30 seconds to make 12 shots from the reference position with a 6 meter line. Shuttle run 5h20m with stroke counters and throw the ball, the essence of which is running racks, installed in parallel in three rows, with dribbling the ball alternately left and right hand followed by a throw at a target 60x60 cm.

To evaluate the mobility offered to perform a test in which the player must make three roll forward, then stand up and catch the transfer made partner. Register number of transmissions for 30 seconds and the test is juggling balls. The essence of the test was that the pair has 2 goals. The player will need to throw the ball at the moment is perpendicular to catch up the ball from a partner and return it to catch his thrown ball (Kasymova, 1998).

The first study carried out at the beginning of the collection. Then study was conducted on 10, 20, 30 days. The collected material was statistically processed with the calculation of arithmetic data, standard deviation and percentage growth rates. As already mentioned above, we obtained baseline and benchmarks in young handball players. During the months of training conducted perform special exercises and mobile games that develop specific speed and agility. For education of physical qualities in the study used the following outdoor games. for development:

- Speed abilities: "Falling stick." "Day Night". "Call rates". "Call". "The change of places." "Offensive." "Rounders". "Counter relay";

- Speed-strength abilities: "Fight of roosters." "Pulling in pairs". "Strengthening the protection." "Fishing rod". "Shuttle";

- Endurance: sports games for simplified rules (football basketball handball..); "Jumping" mobile games. "Runners". "Sulky". "Seine". "The fight for the ball." "Call rates".

- Agility: "Push-pull". "Race balls in a circle." "Narrated sit down." "Hunters and ducks." "Shoot." "Penguin Running ";

- The mobility of the joints, "Stick behind." "Transfer of balls in the columns." "The bridge and the cat." "Ant Running."

The following table lists the outdoor games. which were used in the main part of the session, along with special exercises for the development of special physical qualities handball players and technical - tactical training.

Table 1. Complex outdoor games used in the experiment to improve the special qualities of the handball students

Name of the game	The main type of movement	The physical quality and motor skills	Game Summary

Moving target	Running with dodging	Rapidity. dexterity	The players stand in a circle. choosing of driving. which becomes a circle. playing throws the ball trying to get into the driving. There have been more agile driving managed to survive the longest in the middle of the circle
offensive	Run	Rapidity. dexterity	Two teams are up against each other at a distance of 20m. (Players of the team taking the start of the high and low). and second team players holding hands "come." when standing up at the start of 2-3 meters is given a signal. "Upcoming releases the hand and ran rushes for his home line. The players of the other team and try to pursue. Then calculated the total number of captured and declared the best in the prize-winners meter. Scout does distracting ORU. watch repeats. The Scout finds a moment and quickly takes the ball in his camp. All must catch up. If he is not catching up with the scout. it goes to them. and if the catch. the intelligence is captured
Kangaroo	Jumping	dexterity	Several teams. 1 team players holding the ball ankle leap forward. and they come back and passed the ball to another
Needle. thread. nodule	Running with dodging	Agility. rapidity	All participants form a circle. The first movement begins to needle - this movement repeats and completes the string bundle. those. they are trying to catch up with each other
Time scouts	ORU	Speed of reaction	Divide players into 2 teams. set to face each other. 1 hour 2 scouts. set in the heart of the subject. call one time and one scout. The distance between the 2
Call	Running with dodging	Rapidity. dexterity	The two teams are in two rows along the edges of the site. Alternately sent to the opposite team who he touches it, he catches up three times
Day and night	Running with dodging	Rapidity. dexterity	Students are divided into two teams and get back together. At a signal from the teacher the day this team is catching up with the night.
Hit the ball	Throws the ball	dexterity.	The players of the two teams are placed on lines facing each other. Between them is drawn circle. in the center of the ball. Objective: to knock the ball out of the circle.
Hare homeless	Run	Rapidity. dexterity	Lair forms two people. Each den on the hare. The leader One rabbit. another hunter. According to Seitz team escapes and runs into any den. The task of the hunter to catch up with the hare
Sulky among	Run	Rapidity. dexterity	For the circle and in the circle are the players. Players knocked out of the circle of players in a circle
Sparrows	Sparrows	Rapidity.	Divide into two teams 1- crows. 2 sparrows.

Crows	Crows	dexterity	The leader is the team. After the last words caused a team catches another.

For the development of special physical qualities in the training process based on the study of scientific and methodical literature (Kasymova, 1998; Bronskij, 2006) and our own experience we have developed training system handball players to the Kazakhstan championship in handball and performance in the third round.

Distinctive features of the special qualities of the system speed and agility with mobile games are: changes in the ratio of general physical and special physical preparation in a year cycle of training in favor of the CFP. Instead of the traditional: RPT - Z0-40%. SFA - 60-70% - the ratio was as follows: RPT - 20% and CFP - 80%. And the decision PFD tasks carried out partly by the SFA with the help of mobile games (Ordabaev, Adambekov & Tastanov, 1998).

The classes were conducted by SPP in conjunction with the technical and tactical training 3 times a week.

Exercising with outdoor games held at the beginning of training on the quality of the speed, and then mainly on the development of mobility and at the end of training for the development of power qualities followed by speed-strength exercises and finally carried the movement to joint mobility and relaxation (Bronskij, 2006).

Exemplary games that we have used and will use in the future in the CF during the preparatory part, together with the special set of exercises (Table 1).

The following outdoor games were used at the training sessions: "Protection", "The ball is in the catching", "Moving target", "Offensive", "Kangaroo", "Needle. Thread. Knot", "Cones. Acorns. Nuts.", "Time scouts.", "Call.", "Day and night", "Hit the ball", "Hare homeless", "Sulky in a circle", "Sparrows Crows" and other games for the development of physical qualities.

Mathematical processing of the results of research on computer program Excel «Statistics». Comparison of the physical condition of the test control and experimental groups was performed by Student's test with pairwise unrelated samples.

Results and Discussion

Physical readiness handball students defined in terms of speed-strength, speed and agility (17).

Teaching observations have provided figures. characterizing the gaming action handball players in motion in high-speed mode. The obtained data. performed at maximum speed and harping opponent. It depends on the quality of dexterity (Kefer, Andrejushkin & Zhunusbek, 2015).

This section provides an analysis of the work tables and figures at the students of physical fitness, handball players in the preparatory period.

Analysis of Tables 2 and 3 revealed. that during training camp (TCB) for 1 month using mobile games students - handball on average improved on the 10th day of testing his speed in the exercise, "running at 30 m with the introduction of the ball" at 7.06% (p> 005), and without dribbling the difference was not statistically significant.

Table 2. Study of the dynamics of "running at 30 m with the introduction of the ball" at 7.06% (p> 005)

№	Name	Year birth	Discharge	Experience	Running time on 30m.s			
					Initial data	10 days	20 days	30 days
1	K.M	1998	MSIC	10	4.3	4.2	4.0	3.9
2	M.P	1999	MSIC	8	4.3	4.2	4.1	4.0
3	L.S	1999	MS	5	4.2	4.1	3.9	3.9
4	G.T	1999	MS	10	4.29	4.1	4.0	3.9
5	Ch.A	1998	MS	9	4.5	4.4	4.0	3.9
6	I.T	1999	CMS	7	4.3	4.3	4.1	4.0
7	P.A	1998	CMS	8	4.3	4.1	4.0	4.0
8	K.G	1999	MS	9	4.2	4.1	4.1	4.0
9	K.N	2000	MS	6	4.6	4.4	4.1	3.9
				X	4.33	4.21	4.04	3.94
				Sx	0.18	0.11	0.07	0.15
				%		2.8	6.07	9.00
				p			<0.05	<0.05

On the 20th day of the test results reliable growth amounted to 6% in the run without the ball is 30 meters, and with the introduction of the ball is set to rise 11.03%. On the 30th day of the experiment the results of high-speed qualities of growth, respectively accounted for 9% without dribbling and with the knowledge of at 13.0% (p> 0.05).

Table 3. Study of the dynamics of running time to 30 m from dribbling the ball (s) in handball players aged 16-19 for 3 microcycle monitoring in the preparatory period

№	Name	Year birth	Discharge	Experience	Running Time 30m from dribbling the ball. s			
					Initial data	10 days	20 days	30 days
1	K.M	1998	MSIC	10	4.5	4.2	4.0	3.9
2	M.P	1999	MSIC	8	4.53	4.2	4.1	4.0
3	L.C	1999	MS	5	4.3	4.1	3.9	3.9
4	G.T	1999	MS	10	4.69	4.1	4.0	3.9
5	Ch.A	1998	MS	9	4.75	4.4	4.0	3.9
6	I.T	1999	CMS	7	4.33	4.3	4.1	4.0
7	K.N	2000	MS	6	4.8	4.4	4.1	3.9
8	R.A	1998	CMS	8	4.3	4.1	4.0	4.0
9	K.G	1999	MS	9	4.6	4.1	4.1	4.0
				X	4.53	4.21	4.03	3.94
				Sx	0.18	0.12	0.07	0.05
				P		<0.05	<0.05	< 0.05

	%	7.06	11.03	13.0

Speed endurance, estimated by the test "shuttle run 5h20m" student - handball team showed a significant increase in the group on average data for 1.5 seconds. Moreover, the growth of this indicator was gradual from the beginning to the TCB 30 days there was a gradual decrease in time with the passage of this standard (10 days from the baseline - 0.9 to 20 day - 1.2 s and 30 day - 1.5 s). The largest increase in the speed endurance results is set on the 30th day of examination and was 7% ($p < 0.05$).

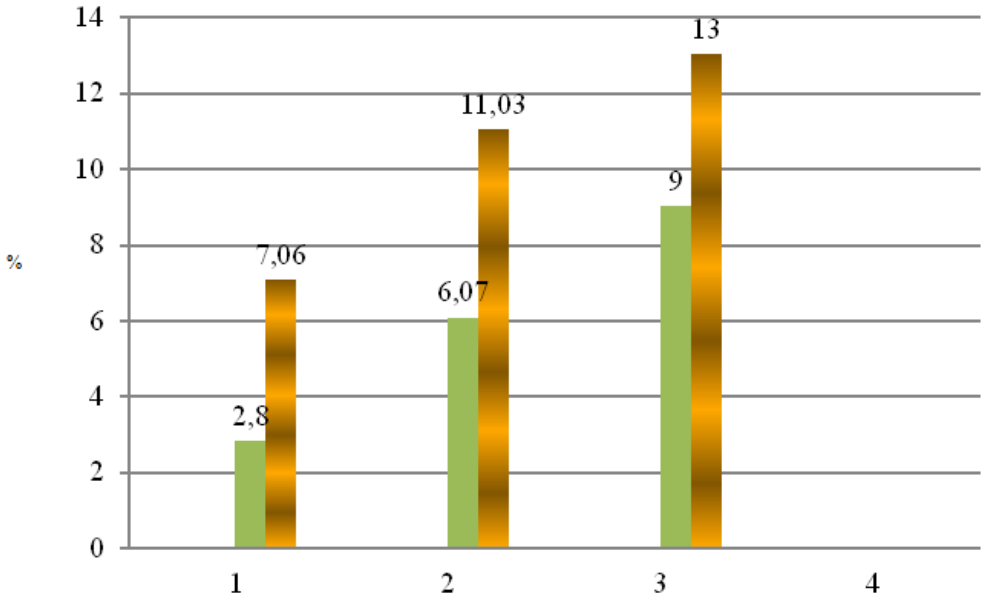

Figure 1. Average percentage change figures running speed time-handball students to 30m within 30 days of the experiment

You can state the fact that the chosen method with the use of mobile games has given a high percentage of growth results in a test run on 30 meters with dribbling the ball.

Analysis of the special preparedness in the accuracy of ball gear tests (Table 3, test 4) showed. which is 10 percent of daily growth rate of accuracy 2nd transfers amounted to 16.3%, 20 day training camp - 14.1% and 30 day experiment compared with the original data by 21.7% ($p < 0.05$).

Table 3 and Figure 2 shows the dynamics of the average of the results of testing by specially trained and the percentage change them to 10. 20 and 30 days of experiment after performing physical activities with a primary implementation of mobile games for the development of general and special training.

Analysis of time spent on the "Stroke counters with the ball," reflecting the special high-speed qualities on day 10 of the experiment showed the decrease of its rates by 6.9%, and by 20 and 30 day of observation of 20.5%.

Table 4. Average physical qualities test scores general and special 30 days of observation in handball players

	Indicators	Initial data	10 days	20 days	30 days
1	Running Time 30m, s	4,33	4,21	4,04	3,94
	% growth		2,8	6,7	9,0
					< 0.05
2	Running Time 30m from dribbling the ball, s	4,3	4,2	4,0	3,9
	% growth		8,1	11,2	13,4
					< 0,05
3	Shuttle run 5x20 s	22,2	21,3	21,0	20,7
	% growth		4,54	5,5	7, 0
					< 0,05
4	Passing the ball on the accuracy of the number of times	9,1	10,9	10,3	11,2
	% growth		16,3	14,1	21,7
					< 0,05
5	Stroke counters, s	13,2	12,3	10,5	10,5
	% growth		6,9	20,5	20,5
					< 0,05
6	Test agility times	3,67	4,89	5,56	6,22
	% growth		33,24	52,49	69,48
					< 0,01
7	Juggling balls, the number of times	19,67	20,78	20,44	21,78
	% growth		5,64	3,91	10,7
					< 0,05

The test dexterity recorded the number of transmissions for 30 seconds, in which the player must make three roll forward, then stand up and catch a transfer made by the partner. Growth results in this test, gradually grew and amounted to 10, 33.2% of the experiment day, the 20th day of 52.49%, and by day 30 - 69.49% of the initial level. As shown in Figure 3, the number of transmission after three somersaults in 30 seconds on average increased by 2.7 transmission. Analysis of the dynamics of growth in percent of the increase showed that the maximum level it fell on the third microcycle from the start of the experiment.

The next test in our research juggling ball was used to assess the level of dexterity test was conducted as follows: the player is invited to catch 2 balls, the first that handball had to throw the ball perpendicular to the top and then catch the ball in flight time of the ball partner throws her 2 ball, which it must quickly catch and immediately return it, and then have time to catch a thrown ball. The result of this test is the number of caught balls in 30 seconds. Test Analysis of skill showed that at the end of the experiment the average from a group of handball players testify increased 2.11 gears, and the percentage of increase was 10.7%. But it should be noted in this test figures 10 and 20 days were no statistical changes in indicators as the increase was only 33.3%.

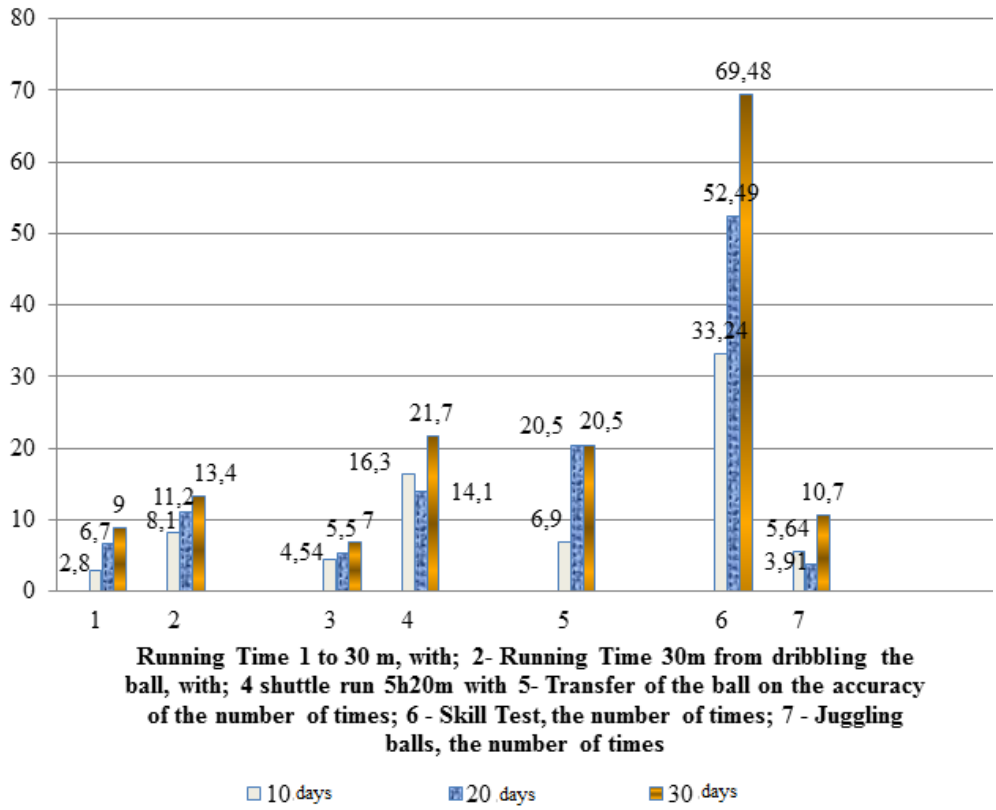

Figure 3. The dynamics have changed the average percentage of test results of general and specialized training of highly qualified handball players -students by 10. 20 and 30 days after performing physical activities with a primary implementation of mobile games

As a result of the analysis of this test suggests that we use money in the form of specially selected outdoor games and exercises for the development of such physical qualities as dexterity, positive impact on the readiness of handball players.

Conclusions

The novelty of the research is related to the definition of the physical characteristics of the individual and the training level of motor readiness of students-handball players. Developed and experimentally proved methods of education differentiated motor abilities, based on the application of the game method and outdoor games. Substantiates trainee thrust load performed during one academic mesocycle training (intensity. V) cause the development of the physical qualities of the students involved in handball.

Obtain objective data of efficiency of influence of development of physical qualities in the conditions of employment for the improvement of the general and special physical fitness of the means of mobile games at students-handball players.

Based on the analysis of the research, the following conclusions:

1 Mobile games are one of the means of physical training of students of handball players. The use in the training process of the complex mobile games contributed to the improvement of running time of 30 meters without the knowledge and the conduct of the ball on the 9% and 13.4% ($P < 0.05$).

2 It was found that the least influence exerted on a special outdoor games endurance (shuttle run), this test time significantly changed by 7.0% (<0.05). But the greatest effect of growth identified in the physical agility as that progressed from the 10 days of the experiment at 33.24%, the 20th day at 52.49% and 69.48 by the 30th day ($p < 0.01$)

3 Analysis of the research showed that in the group of highly qualified sports that practiced by the proposed method, accompanied by increase in the level of performance, which may indicate the significance of mobile games in the preparation of handball.

4 Used our mobile games and special exercises to improve the quality of special speed handball players should be performed in the specified sequence, the dosage can vary depending on the degree of preparedness of athletes;

5 Exercises to develop a special skill to combine the elements of gymnastics and be close to nature and the motor structure to the elements of the game in handball;

6 offered in sets of exercises can be recommended in a training process of handball:

6.1. In the development program of physical desirable to include them as an additional material moving games system comprising a game. aimed at the development of certain motor abilities and their combinations (general motor capacity) and training of special physical qualities. the relevant requirements of handball as a sport (special abilities).

6.2. The proposed method is particularly effective if the lessons of outdoor games to spend every day in the week as part of the training sessions and breakout. On physical training and specialization handball rationally mobile games take up to 30 minutes, the main part.

Such a regime is not only promotes quality formation of special abilities. but also significantly speeds up the individual-group performance growth rate of gross motor abilities.

6.3. In preparation of the studies it is advisable to use those games that give sufficient load, direct attention and increase interest in the future of game activity.

After the warm-up (as a rule. A small volume and load). You can use the game "Day and Night", "offensive", "Relay sticks and jumps".

6.4. To improve the emotional state you can use the game "Catch the frog", "Jumpers," "Knockout Race," "Sulky circle", "Race wheelbarrows", "Crossing" and others.

To remove the fatigue playing exercises should bear the greatest number of unusual elements in this case fit the game "Vertunov", "Labyrinth", "moving target", "Protection of strengthening", "Running penguin", "Call", "rod" and others.

6.5. In the final part of the training team it is recommended to play the character, approached by displays of special abilities to sports games, "Rounders", "Football", "four ball", "Narrated by - sit down," etc.

6.6. To increase the level and rate of growth of physical performance to the greatest extent are multi-purpose games. At the stage of initial training multipurpose games contribute to the growth of sports skill without additional load on the nervous system.

Disclosure statement

No potential conflict of interest was reported by the authors.

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