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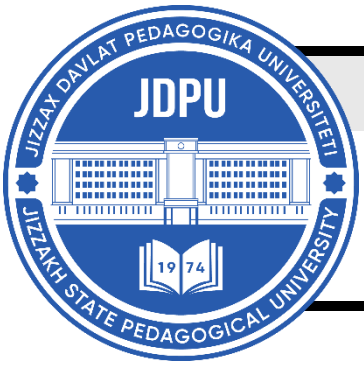

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METHODOLOGY FOR DEVELOPING GOALKEEPER TECHNIQUE IN HANDBALL

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ABOUT ARTICLE

Key words: Handball, ampoule, goalkeeper, individual, preparatory period, competitive period, transitional period, basic technical exercises, game simulation, stress, recovery training, training process.

Abstract: This article presents information on the methodology of using a complex of exercises that develop the game technique of goalkeepers in handball, as well as an analysis of its effectiveness.

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Relevance.

Adequate simulation of handball in the world allows for the acquisition of new knowledge about the structure of the game in handball and the peculiarities of the interaction of its elements. In modern sports, there is an increase in sports achievements not due to a single training, but as a result of increasing the level of comprehensive training. At the same time, scientific research was conducted on the use of modeling methods in sports, the development of modern programs that allow for the simulation of the process of game activity in handball, and the optimization of training loads for field players. There is a need to develop scientific and methodological foundations for training goalkeepers in handball training groups.

The aim of the study is to develop proposals and recommendations for improving the technical training of handball players in the training group during annual training sessions.

Research objectives. 1. development of a methodology for the development of technical training of goalkeepers in handball during annual training periods;

2.Improvement of a complex of three-block exercises aimed at developing the goalkeeper's game technique;

The results of the study and their discussion. The following were taken by us as the studied factors of the team's game activity: the level of tactical and technical skills of players playing in defense and attack, the contribution of players of different playing roles to the overall team result, the influence of the speed and morphofunctional qualities of players on the team's performance.

The scheme of all experiments was the same. In each of them, the model created in the process of simulation modeling reflected the process of competition between two handball teams. Conditionally, based on the initial placement of commands on the monitor screen at the beginning of the experiment, the teams were called left and right. The parameters of the right team players remained unchanged in all experiments. In each of them, in six experiments, depending on the task, only the parameters of the players on the left side were changed. Since the model has the properties of symmetry and mirroring, the input parameters of players on the left team were considered experimental, and the input parameters of players on the right team were considered control parameters.

In the scientific research of I.Tursunov and A.Muminov, graphs of changes in the numerical values of the results of attacks of the right and left teams with a gradual increase in the values of all attacking parameters of left team players are presented. The variable parameters of the attack of the players of the experimental group were as follows: the probability of successful execution of a shot at the goal, the probability of successful execution of a pass, the probability of successful victory for handball players, the probability of scoring a goal when throwing the ball were analyzed. All parameters of the attack, the step of change of each player on the left side, were 0.3. The technical and tactical parameters of the right wing players did not change during the experiment in all applications of the simulation model. Let's consider the dynamics of the effectiveness of attacks on the right and left teams when the attacking parameters of players on the left team change.As can be seen from Table 1.3, the

number of goals scored by the right team decreased steadily, but unreliably, from 14.5 to 10, while the number of goals scored by left team players increased sharply, from 8.5 to 24.5 (each experiment consisted of implementing 100 models). At maximum values of the variable factor, practically every second attack of left-wing players ends with a goal capture. This indicates that the variables are directly and to a very high degree related to the effectiveness of the left team's attacks. The effectiveness of the opposing team's attacks changed in the experiment, statistically unreliable. Without this change, the team's attacking skill level and performance will not change.

The process of operation of the simulation model of handball can be represented as follows. A player possesses a certain set of arbitrarily assigned technical and tactical qualities and moves step by step according to the algorithm of their actions during the game. According to the algorithm, each step of the player's action is carried out based on an assessment of the situation on the field, which arose as a result of the actions of the player's own and the opposing team's players in the previous step. From the presented results, the following conclusions can be drawn: an increase in the quantitative values of all defensive parameters of players of one team directly affects a significant decrease in the attacking effectiveness of the opposing team. The results of the experiment allow us to talk about the adequacy of the proposed method of simulation modeling of the structure of game activity in handball, the change in the value of the defensive parameters of players of one of the teams. The selection of a certain duration of one's movement is carried out using the resulting number obtained by multiplying the value of the indicators received from the sensor by the probability of the variables of this player and all other players in the field. After this, the player performs the following calculated move. After all the players make a decision, the situation on the field changes dramatically. A new step of the team attack begins. The situation repeats itself. The process continues until the team's attack reaches a logical end and a clear result is obtained. The presented model can also work in automatic mode, graphically displaying the game process on the monitor screen. This work regime is most useful in the process of tactical and theoretical training of players.

Table 1

Statistics of attack results in determining model performance (according to Sh. Pavlov and F.A. Abdurakhmanov)

T/r	Result of the attack	Left team	Right team
1	(Fast breakthrough) position	14	1

2	Goal	4	4
3	mistake	1	2
4	Loss of ball during shooting	0	0
5	Loss of ball in attack	11	7
6	Loss during passing	0	2
1	Position Goal	17	3
2	mistak	4	4
3	Loss of ball during shooting	5	4
4	Loss of ball in attack	0	0
5	Loss during passing	0	17
Total attacks		56	44

The main requirement for any simulation model is its adequacy to a real phenomenon or process. Verification of the adequacy of the created simulation model was carried out in several ways. In one of them, the data obtained from various model characteristics of handball were comparatively evaluated according to the model characteristics obtained as a result of the simulation experiment. The data obtained in the simulation model are fully consistent with the data on the results of the attack, available in specialized literature. For further verification, an expert, visual analysis of the adequacy of the simulation model was carried out.

14 highly qualified respondents participated in the survey, who had to assess the level of adequacy of the real game process to the process occurring on the screen when they watched the handball game on the monitor screen. The degree of adequacy of the model was assessed, firstly, by the absolute value of the assessments made by experts when answering the questions, and secondly, by the degree of correspondence of the opinions of experts when answering the questions.

The method of simulation modeling allows conducting an unlimited number of experiments in such a plan.In the development of goalkeeper technique in handball, the most frequent use of the position of leg stretching (spagate) is when performing attacking movements, so he was taught to perform these movements freely in all directions. The goalkeeper performs various jumps near the game, which is of particular importance in competitions. The goalkeeper's approach and jump to the player throwing the ball is one of the complex methods of guarding the goal. In order to reduce the target angle of the goalkeeper, the goalkeeper attempts to block the ball that is aimed at the goal by jumping up or in length.

When the goalkeeper jumped, the movement of the legs and arms to the side was reinforced to reduce the direction of the ball. In the goalkeeper's struggle with the opponents for the ball, deceptive actions were often performed. For the purpose of distraction, he bends to one side and then blocks the other side, often using deceptive tactical maneuvers. In such cases, the attacker throws the ball over the goalkeeper, but the goalkeeper, who had expected this in advance, immediately turns back and blocks the way of the ball. Technical actions such as stopping the ball in a spat position, blocking the ball with one hand from above, stopping the ball with the foot, and stopping the ball with a big step were being improved. At the same time, a set of special exercises aimed at developing the technique of field players and goalkeepers at the training stage has been developed.

When answering selection questions in handball, the average value of the assessments given by experts is high and ranges from 7.6 to 8.4 points (on a ten-point system). The degree of correspondence of the respondents' opinions was assessed by the magnitude of the coefficient of variation of expert assessments when answering the questions posed. The coefficient of variation of expert assessments is low and ranges from 6.3% to 8.4%. This indicates that the opinions of experts on the adequacy of the simulation model to the real game process taking place on the field are sufficiently coordinated.

The complex of exercises for developing the goalkeeper's game technique primarily focused on the opposite actions of two goalkeepers, as well as special means aimed at implementing a team tactical strategy as a goalkeeper field player. Technical elements of resistance to attack on the goal by players of all positions, such as jumps, right and left from the jump, movement of hands and feet, visual targeting of attackers, quick decision-making against their actions, and response, have been incorporated into this special exercise complex. Through the regular use of a special set of exercises, the goalkeeper's technique, reaction speed, and the ability to defend the goal were expanded. Our research also focused on the goalkeeper's playing tactics.

Summary. Using the developed methodology for developing the technical training of goalkeepers in handball during our research, it was found that the effectiveness of performing the movement of throwing 500 grams of ball from the ground with the main hand improved by 12.6% in the subjects of the experimental group.

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