

Dynamics of jumping development of volleyballers in different ages

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Abstract: The growth dynamics of the indicators representing these qualities was characterized by a very slow growth in volleyball players aged 19-21 years (jumping to 2 cm, jumping endurance to 3.32 times), the norm set by the program was found to be below the required level. Even the girls' volleyball team of the Bukhara regional team did not show high results

Key words: jumping back or forward, ball, height, running position, choosing the angle of bending of the legs.

It is known that the prosperity of the future of sport depends on the breadth and quality of sports resources. Therefore, it is important to bring Uzbek sports to the world stage, to raise it to a competitive level, to organize children's sports on a scientific basis and to introduce effective pedagogical technologies in this regard. Only appropriate organizational and methodological measures are required to be implemented on a scientific basis. However, the achievement of such qualities can be achieved by being extremely careful, gradually increasing the training load in a "wavy" direction. Of course, this process is more efficient and dynamic, based on the principles of continuity and regularity, as well as the application of training loads in accordance with the functional capabilities of the "object". Nowadays, sports clubs, children and teenagers sport schools, and even some national teams organize the training on a scientific basis, plan the loads, select and apply general and specialized exercises based on the age, gender, physical and physical condition of the children. Psychofunctional possibilities are not realized based on objective test results. Similar shortcomings and problems can be seen in the practice of training volleyball players.

It is true that textbooks and manuals on volleyball published in recent years have interpreted the information and research results on this topic or issues (L.R.Ayrapetyanst, M.A.Godik 1991; Yu.D.Jeleznian, 1998, 2005; A.V.Belyaev, M.V.Savin, 2000, 2009; Yu.N.Kleshchev, 2003; L.R.Ayrapetyanst, 2006; L.R.Ayrapetyanst, A.A.Pulatov, 2012).

Also in these sources, the issues of kicking from different zones, blocking, jumping back or forward, coordination of jumps performed to enter the ball, height, position-running, the choice of the angle of bending the legs has not been thoroughly studied as a subject of research. In addition, the jump is measured only by the Abalakov or "diagonal screen" method. Jumping endurance is measured by the maximum number of times a ball hangs at a certain height. By the way, some studies have shown the speed of these qualities in the "theometric platform" instrument. (A.V. Belyaev, M.V. Savin, 2009). However, strain gauges, due to their weight and operational time, do not allow rapid assessment and control of jumps. Taking into account these and other features that provide the jump (discussed above), we have managed to invent a new technological tool that allows us to explore different aspects of this quality. (Full technical and technological details of the device are given in Chapter 2). This information,

problems and factors discussed indicate that the topic chosen for the dissertation is of great practical importance.

Aim of the research: to determine the means of rapid and effective formation of this ability on the basis of the study of the kinematic factors that provide the dynamics of the development of jumping in volleyball players of different ages.

The purpose of the research is to:

- To study the jump and the kinematic factors that provide it in young volleyball players using the current Abalakov method;
- Testing of technological equipment designed for monitoring and evaluation of jumps;
- To determine the effectiveness of special exercises designed for the formation of kinematic elements that provide jumping.

During voluntary selection of candidates for volleyball clubs and national teams, as well as during training sessions trainers pay special attention to physical qualities such as jumping ability, jumping and jump endurance. However, not all trainers always use effective exercises in the development of these skills and qualities, and it is not considered a serious matter to assess the dynamics of their formation (growth) using appropriate tests. However, training in jumping skills, selection of targeted exercises for the development of jumping and jumping endurance, regular monitoring (evaluation) of the dynamics of the development of these qualities allow you to effectively organize this process.

Given these pressing issues, we have conducted a number of studies on volleyball players of different ages and sports backgrounds.

The study involved 24 boys and girls aged 19-21 who had been playing volleyball for 2 years.

The results of the study showed that the usual traditional exercises with all volleyball players and the jumping exercises used in them are related to the age and athletic training of those who practice jumping and endurance. indicates that it is not enough. For example, in 19-21-year-old boys, who have been involved in school volleyball for 2 years, the height of the vertical jump from the ground in early September 2019 reached an average of 30.2 ± 2.24 cm. 30.8 ± 2.26 cm after 4 months (early December) and 32.2 ± 2.38 cm 3 months later. (November 2019), again 3 months later 33.0 ± 2.41 cm. increased to halos (Table 1).

It can be seen that during almost 1 year of traditional training, the growth rate of jumping and jump endurance performance was very slow (Figure 20).

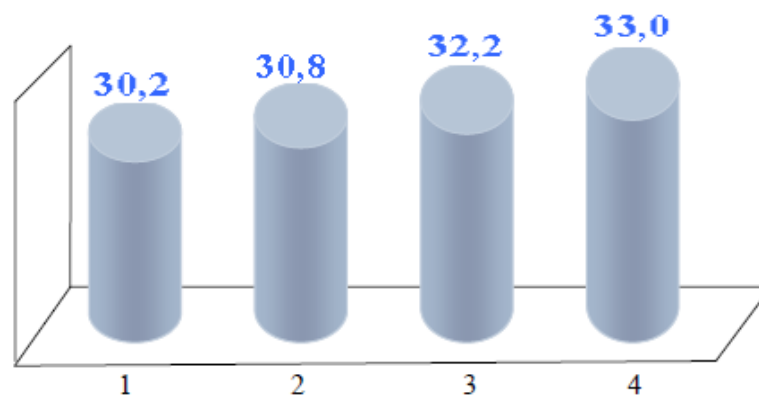
According to the opinions of Yu.D. Jeleznyak, L.R.Ayrapetyanst, and A.A.Pulatov, the height of the vertical jump in children aged 19-21, who played volleyball for 2-3 years, was 40-42 cm. or an average of 41.4 cm. should be equal. This means that the level of jumping recorded in volleyball players aged 19-21, who participated in this study, does not meet the requirements.

The height of the vertical jump was 32.6 ± 2.44 cm, 33.2 ± 2.34 cm, 34.5 ± 3.02 cm, and 36.4 ± 3.14 cm, respectively, according to the study periods. formed. Unfortunately, when comparing such figures, the difference between the height of the jump from the ground and the jump from the run is about 2-3 cm. The difference can be 8-2 cm, and in older qualified volleyball players - up to 20-30 cm. According to the above sources, the height of the vertical jump in running 13-14 year old volleyball players is 50 cm. recorded around.

Table 3
Dynamics of jump development in 19-21 year old volleyball players who have been playing volleyball for 2 years (n=24), ($\bar{x} \pm \sigma$).

Tests	2019 y. September	2019 y. October	2019 y. November	2019 y. December
Vertical jump from the ground (cm.)	30,2±2,24	30,8 ±2,26	32,2 ±2,38	33,0±2,41
Run and jump vertically (cm.)	32,6±2,44	33,2±2,34	34,5±3,02	36,4±3,14
25 cm from the raised arm. maximum number of jumps (times) on a speed ball hanging high	6,34±0,44	6,88±0,48	7,38±0,74	9,66±0,82

Figure 1. Dynamics of increase in vertical jump height in 13-14 year old volleyball players



Note: 1-2019, September; 2-2019, October; 3-2019, November; 4-2019, December

As we know, today's volleyball lessons last 2-3 hours, and competitions last 1-2 hours. If we take into account the training and competition games held in the competition sticks, it becomes clear that not only high jumping, but also jump endurance is very important for volleyball players.

In 19-21-year-old volleyball players who participated in our study, the indicator of jump endurance was 25 cm from the upper arm. The maximum number of jumps to the high-hanging filler ball is 6.34 ± 0.44 (September 2019), 6.88 ± 0.48 (October 2019), 7.38 ± 0.74 (2019, November) 9.66 ± 0.82 (December 2019). Are these averages enough for volleyball players of this age? The question arises. If we take into account that in modern volleyball almost all modes of play are performed by jumping, of course, such a jump is not enough endurance. Unfortunately, the results of the jump endurance test used by us are not available in official sources.

The results of the study and their comparative analysis allow us to recognize the following

conclusions:

1. A visual analysis of the training of volleyball players of different ages and training shows that in today's volleyball, no serious attention is paid to the coordination of jumping techniques, coordination and jump height, which is a priority in the development of jumping and endurance.

2. Studies on the dynamics of the development of jumping and jump endurance in 2019 show this. The growth dynamics of the indicators representing these qualities was characterized by a very slow growth in volleyball players aged 19-21 years (jumping to 2 cm, jumping endurance to 3.32 times), the norm set by the program was found to be below the required level. Even the girls' volleyball team of the Bukhara regional team did not show high results.

3. Proved that the unity of the basic kinematic elements that ensure jumping and jump endurance, as well as the composition of the jumping technique in accordance with the method of jumping, and its integration function are not observed. It is this situation that leads to the conclusion that jumping and jumping endurance are performed at a level below the ability of volleyball players.

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