

Efficiency of actions of the setter in competitions of students' women's volleyball teams of the Kharkiv region

Yevgeniya Strelnykova
Tamara Liakhova

Kharkiv State Academy of Physical Culture, Kharkiv, Ukraine

Purpose: to define efficiency of performance of the second serves at the organization of the attacking actions of team in SVL of Kharkiv.

Material & Methods: the analysis of references showed that researches are practically not conducted in student's sport of Ukraine. The competitive process with participation of 9 players of role – setter qualifications of the I adult category was investigated in the pedagogical observation, by mathematical processing of the obtained data efficiency of actions of the setters at the organization of the attacks of women's teams of Kharkiv Student's volleyball league was defined.

Results: defining indicators of efficiency of technical-tactical actions of the setter in the organization of attacks of women's teams of Student's league of Kharkiv, the analysis of references on condition of problem of training of the setter was carried out, tactical models of game in attack, in which the setter and efficiency of game actions of the setter, takes part in the organization of the attacking actions of women's teams of Kharkiv Student's volleyball league are defined.

Conclusions: the offered methodical approach based on the quantitative assessment of competitive activity will allow rationalizing structure and distribution of means of trainings and to increase efficiency of the whole educational-training process of training of the setters, will improve the game in attack of the teams of SVL of Kharkiv.

Keywords: student's volleyball, setter, tactical systems of game.

Introduction

Ukrainian volleyball celebrated the ninetieth anniversary in 2015. Playing volleyball deserved interest and respect from fans and sportsmen for times of the existence [5].

World volleyball hasn't recognized leaders many years. If the fight for the superiority was conducted between two, sometimes three favorites in the past, then it is not possible to provide winners actually at the moment.

Certainly, fierce competition, impossibility to predict winners increases the popularity of volleyball worldwide.

It is necessary to define that teams of the European countries have the greatest influence on state and development of the popular game. All these teams have bright players who perform functions of the setter. Personality, talent, individual skill, style of the game of these players, as a rule, characterize the "face" of the whole team. Students' teams are not represented by the exception in this case. Competitions of the World Student Games, Student Games of Ukraine and Student's Volleyball League of Ukraine and SVL of Kharkiv testify to it [1; 9].

Not in view of the fact that the considerable attention is paid to training of sportsmen for the competitive activity, not enough attention is paid to problem of increase in efficiency of actions of the setters in the organization of attack in scientifically-methodical literature, as defines the relevance of materials of the given research.

Communication of the research with scientific programs, plans, subjects

The research was conducted according to the subject of the plan of the RW of Kharkiv state academy of physical culture 2.8. "Improvement of the educational-training process in sports" (number of the state registration is 0111U003126).

The purpose of the research

To define indicators of efficiency of technical-tactical actions of the setter in the organization of offensive actions of women's teams of Student's volleyball league of Kharkiv.

It is necessary to solve the following tasks for the achievement of this purpose:

- to carry out the analysis of references on condition of problem of training of the setter.
- to define tactical actions in attack in which the setter takes part.
- to define efficiency of game actions of the setter in attacks of women's teams of Student's volleyball league of Kharkiv.

Material and Methods of the research

We investigated indicators of the competitive activity with the assistance of the setter in the offensive actions of women's teams of Student's volleyball league of Kharkiv, such methods

of the research were used in the research: analysis of scientific literature, pedagogical observations, mathematical processing of the obtained data. 9 players with the role – the setter of qualification of the I adult category were investigated.

Results of the research and their discussion

Technique is made by the methods and means, which are necessary for conducting the game in volleyball. Technique of volleyball consists of the following methods: stance, movements, passes, serves, attack hits and blocking. It is established by us that teams have executed 14278 technical actions at the 24th game (81 sets). It comes up from this indicator that 176 technical elements were performed on average for the set by the team [8]. The main part of elements is occupied by passes and attack hits – 42%. Receiving of serve, defense and secure, borrows – 39%. Serve occupies 12%. Least of all technical actions were performed on blocking – 7% (fig. 1).

Indicators of performance of game elements on average for the set are displayed in fig. 1. The place and role of separate techniques are different in the game. Beginners have the number of techniques which is used in the game; it often comes down to two: to serves and passes, and the specific weight of passes at them reaches 75–80%. It occurs due to the reduction of specific weight of attack hits and blocking. It must be kept in mind that receiving and pass are not two techniques of the game that essentially differ one from another as, for example, attack hit and blocking. At the heart this is only action of the player which essence, – by means of hands to change the initial direction of flight of the ball on such, which is demanded by the game situation for achievement of the desirable result. The overhead pass of the ball allows to transfer the ball most precisely to the partner, therefore, this way is more often applied as the second pass, this is pass for the attack hit, and is used at the offensive actions. Efficiency of the game in attack depends not only on the technique of performance of the overhead second pass, but also on its tactics. The main tactical task in this case – to create the best conditions for the attack by the attack hits to the partner, using passes of different speed, being on duty them by the direction, length, height, performing the distracting operations, trying to obtain reserve of passes, considering situation and technical abilities of forwards of the team, estimating the blocking possibilities of the team of the opponent. Therefore, teaching the technique of

performance of the overhead pass, it is necessary to open its tactical component. The overhead pass is applied most often in basic situation; the overhead pass in jump or with falling is applied much less often at beginners. The overhead passes are divided on pass forward, over themselves, back in the direction to the setter. By length they can be: long are the passes, which are directed through the zone (for example, from the zone 2 in the zone 4), short – are oriented to the next zone, for example, from the zone 3 in the zone 4, and shortened – are oriented to the zone (from the zone 2 in the zone 2). High, average and low passes are distinguished by height. Low pass has the smallest height of trajectory over the net (to one meter), average – to two meters, high – is higher than two meters. Passes can be slow by speed of flight of the ball (to 10 m·s⁻¹), accelerated (to 16 m·s⁻¹), shoot (more than 16 m·s⁻¹). Besides, there are passes close to the net (to half a meter) and distant from it (more than a half-meter). It is possible to tell about value of pass in modern volleyball that the skill level of players and teams in many respects is defined by the level of mastering technique of pass.

Refereeing presents high requirements to technically correct performance of passes. Unlike other game sports, where it is not ideal from the point of view of technique, the performed receiving can bring success to the team (hit of the ball in the rim in basketball, goal in hockey), the technique of performance of receiving, irrespective of its efficiency, is estimated by referees in volleyball. Insignificant errors in the technique are fixed by referees at once, and the ball is passed to the opponent that finally affects result of meeting. Considering the high specific weight of the overhead pass in total of techniques of playing volleyball, the high requirements to the method of performance, which is offered by refereeing, big tactical load, the considerable part of time in the educational and training process on volleyball is taken away for study and improvement of the overhead passes. Exercises on technique of the overhead passes join in each educational-training class, irrespective of other tasks, which are solved in it. In literature all authors unanimously admit the fact that study to techniques of playing volleyball has to begin with studying of the overhead pass [2; 5].

Considering the technique with its tactical contents, it is lawful to call the first pass as receiving of the ball and to refer it to the technique of defense, and the second pass – to the technique of attack. Besides, receiving of the ball even from the most difficult situation is tried to be executed directly with task to leave the ball in the game of optimum amount of time. Unfortunately, there is no unity in the plan of terminology in special literature, and it is possible to meet such combinations as receiving and pass of the ball, the first pass and the second pass, receiving-pass. Each technique includes means which

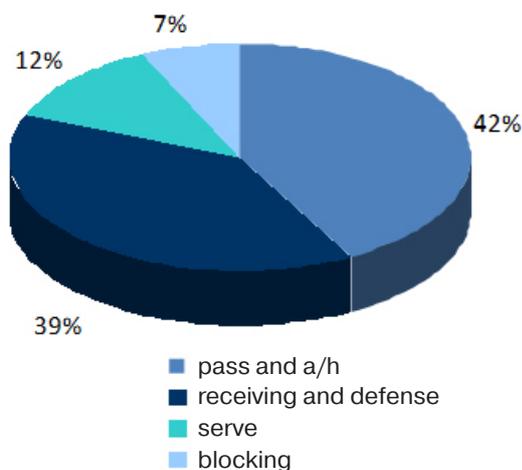


Fig. 1. The partial number of performance of basic elements during the game (%)

Table 1
Types of pass from above by the main signs in volleyball

№	Types of pass from above at organization of attack in volleyball		
1	shortened	short	long
2	low	average	high
3	shoot	accelerated	slow
4	close to the net	distant from the net	on the backline
5	forward	over	for the head

differ one from another in performance details (two hands from above, two hands from below, and one hand from below, one hand from above). Options of technique are defined by specifics of performance of technique by signs of speed, the direction and trajectory of flight of the ball. All this demonstrates that kinds of performance of this technical game element depending on problems, which are solved by this or that player at present in this game situation, are hidden under the name receiving-pass of the ball.

Big variety of versions and options of passes is defined by their tactical content (appointment), and also conditions of their performance. There is close and difficult interrelation between details, versions, options, conditions of performance and purpose of receiving. Efficiency of actions of the setter is defined by his technical arsenal. It is preferred as technique of possession of the ball, tactical thinking, and peripheral sight, not without reason at his study. Strong mastering of all subtleties of the second pass of the ball, finishing it to perfection – such task faces the setter. All coaches demand good pass from the dispatchers, but forget that quality of pass first of all depends on correct position of legs, trunk and hands, and also on distance of point where the ball has to be directed. The setter has to know well manner of the game of forwards of players from different passes, their physical standards and mental state, has to be guided well in any game situations, has to be able to analyze that arise during the situation game, to know all nuances of tactics of the game.

Definition of quantitative indices of performance of the second passes by different signs was one of problems of our research. As it was stated above, the systematized classifica-

tion of the second passes in volleyball by the following signs: by length (long, shortened, short); by height (high, average, low); by speed (slow, accelerated, shoot); by distance from the net (on the backline, distant from the net, close to the net); by the direction of performance (forward, back, over).

We have investigated all performed passes by requirements of the existing classification. Results of processing of protocols of code record of games concerning performance of the overhead pass by the setters; it is displayed in figures 2–6 in the form of charts. These charts display quantitative indices of performance of different types of the second passes at the organization of the offensive actions of women's teams.

The long pass, which was performed by the setter, has the greatest quantitative index in 74% of cases in the game. This pass is used for the organization of the offensive actions by forwards of the 4 zone. Shortened (14%) and short (12%) passes have approximately identical percent of use in the game. In our opinion, it is connected with the fact that setters use these game elements uncertainly in connection with low quality of receiving and bad accuracy of finishing in defense.

Indicators of passes by speed are attached indicators by height in proportion (fig. 4).

So, we could see that height indicators by sign "low" – 8% answer "shoot" passes – 6%, "average" height – 37% close on indicators to "accelerated" passes, and "high" passes – 55% close on indicators to "slow" – 64%.

There is indicator by sign "distance from the net" in classification of passes in volleyball, which is displayed in fig. 5.

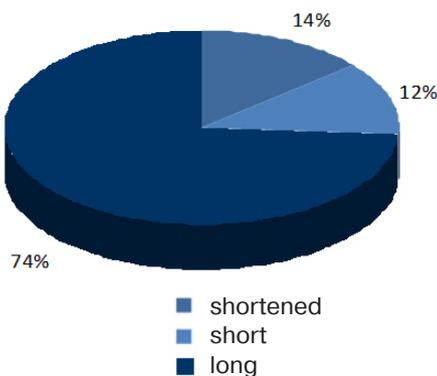


Fig. 2. The partial number of the second passes during the game (by length)

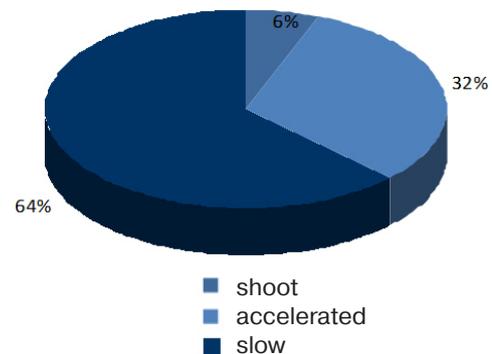


Fig. 4. The partial number of the second passes during the game (by speed)

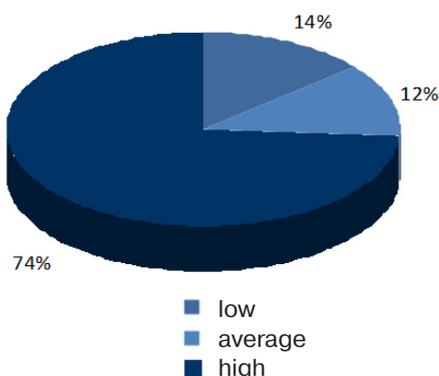


Fig. 3. The partial number of the second passes during the game (by height)

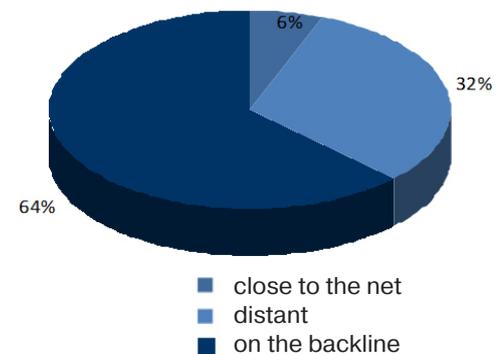


Fig. 5. The partial number of the second passes during the game (by distance from the net)

This is very important indicator in modern volleyball as growth of the blocking players of the opponent and the right "to transfer" during blocking of hand to the party of the opponent grants privileges to defenders of the first line of the opponent. Apparently therefore, the quantity of «net» passes is more and more reduced, which are performed on short distance from the net, especially in volleyball of the highest sports skill.

The higher qualification of the setter is, the more exact and more effective second pass is offered to the forward.

Indicators of passes by distance from the net have no interrelation with one sign as also high and slow; different types of passes can be both close to the net, and distant.

One more important indicator in classification of passes is the direction, in which it is executed. Pass performance back for the head is possible only at full mastering of the technique of passes as it is connected with the difficult coordination movements and development of time-spatial feelings in the player. Apparently therefore, use of the different directions of the second passes for the organization of the offensive actions gives big versatility of attack and possibility of achievement of victorious result for the account of offensive actions to the team [2]. The setter, who has passes, different by signs, in the arsenal by means of them, can decide difficult tasks that the coach of the team puts for the achievement of victory. The effective technique, differing high coordinate, firmness and

profitability, allows the setter to achieve the highest results at the organization offensive actions of the team during the games at competitions. Results of our research of the direction of performance of the second passes are displayed in fig. 6.

Materials of the research testify to big advantage in indicators of performance of pass by the direction forward – 71%. In our opinion, it is connected with the fact that the setter feels big confidence in the reformed passes in this direction as studying of the overhead pass begins by different signs of speed, length, height and distances, from the net by the direction – forward.

The setter performs second passes in different game situations at the organization of the offensive actions of the team during the game. So, the game situation in the organization of the offensive actions has the name "game on set" at receiving of serve of the rival. It is caused by the fact that there are recognized parameters of performance of serves which influence performance of receiving and more static position of players, which are located on receiving in volleyball. In our opinion, it influences also efficiency of performance of the second passes at the organization of the offensive actions of the team at the game "on taking down" (fig. 7).

Analyzing the obtained data, it is visible that the setter have very high percent of efficiency of performance of the second passes on indicators "good" (54%) and "excellent" (28%) in game situation "on taking down". It demonstrates that in standard situations on receiving of serves of the rival which are, as a rule, formed on trainings, the setters feel confidence in performance of technical element – the second pass on hit.

Game situations change constantly and very quickly in volleyball during the game as feature of game provides need to give the ball to the opponent by serve for possibility of the organization of the counterattacking actions in response to the attack of the opponent from "taking down". Therefore, there is the concept - "playing to the end" in volleyball. It is the game situation in which the setter together with the team will organize the attack after the defensive play. Situations in "playing to the end" are most dramatic as the number of transitions of the ball on the one hand of the platform on the friend can be very big. In these game situations as for the rule, the team, which has big game endurance, wins. Efficiency of the sec-

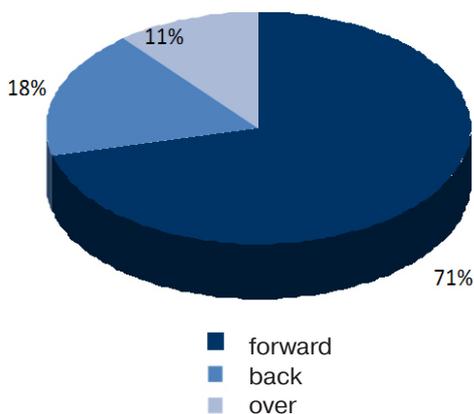


Fig. 6. The partial number of the second passes during the game (by the direction)

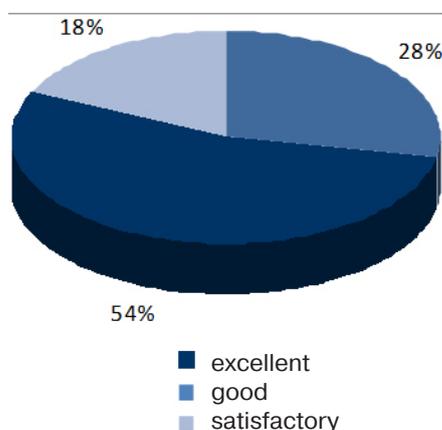


Fig. 7. Efficiency of performance of the second passes on "taking down" at serves of the opponent

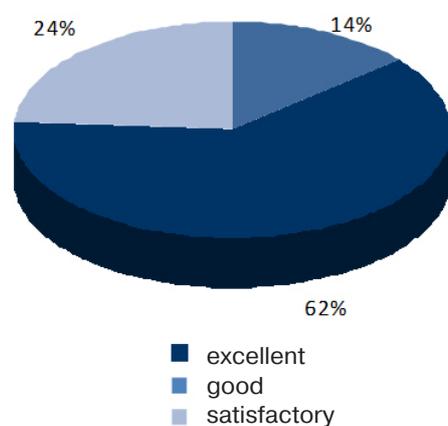


Fig. 8. Efficiency of performance of the second passes in playing to the end

ond passes, performed by the setter, is influenced dynamic game situations and by possibility of their repeated repetition at draw of one point (fig. 8).

We can see that the percent of efficiency of performance of the second passes by the indicator “satisfactory” has increased (24%) in compared to the indicator of efficiency of performance of the second passes “on taking down” (18%), the indicator of efficiency of performance “good” in the situation of playing to the end has increased (63%) in compared to the situation “on taking down” (54%) at the organization of the offensive actions in playing to the end. It, in our opinion, demonstrates that female players of SVL of Kharkiv have seized the stable technique of performance of the second passes.

Conclusions

The offered methodical approach, which is based on the quantitative assessment of competitive activity, will give opportunity to rationalize the structure and distribution of means of trainings and to increase efficiency of the whole educational-training process of training of the setters to the organiza-

tion of the game in attack.

Results of researches can be used for the analysis and assessment by coaches of actions of the setters at the organization of the attacks at “taking down” and in “playing to the end”. On the basis of the made research we think that it is necessary to pay more attention to improvement of technical training in the tactical tasks in connection to realization in training of the setters. And also it is necessary to reconsider priorities of the choice of different types of passes at the organization of the attacks depending on quality of receiving and defensive play. It will give the chance to the coach to work in the training process on use of various combinations in the game of forwards.

Prospects of the subsequent researches

In the future the necessity occurs to analyze interrelation between types of preparation on the basis of the obtained data of the analysis of competitive activity of the setters of the women’s volleyball teams of SVL of Kharkiv in our research. It will give opportunity to coaches of the teams to optimize the training process of preparation for competitions and to define the main directions of improvement in types of preparation.

Conflict of interests. The authors declare that there is no conflict of interests.

Financing sources. This article didn’t get the financial support from the state, public or commercial organization.

References

1. Vatsaba, O. M. & Stepanyuk, S. I. (2009), “International student sports movement as an important component of international sport”, *Fiz-vospitanie studentov tvorcheskikh spetsialnostey*, No 2, p. 19. (in Russ.)
2. Viera, B. & Fergyson, B. (2004), *Volleybol: shagi k uspekhu* [Volleyball: Steps to Success], Astrel, Moscow, 161 p. (in Russ.)
3. Volkov, Ye. P. 2005, “Features of adaptation to the competitive activity of highly skilled players in volleyball teams”, *Problemy i perspektivy razvitiya sportivnykh igr i edinoborstv v vysshikh uchebnykh zavedeniyakh*, pp. 33–36. (in Russ.)
4. Deminskiy, O. at al. (1997), “Model specifications volleyball high level of skill”, *Suchasni problemi rozvitku teorii ta metodiki sportivnikh rukhlivikh igor : Tezi Vseukrainskoi naukovo-praktichnoi konferentsii* [Modern problems of theory and methodology of sports mobile games: Proceedings of the All-Ukrainian scientific-practical conference], Lviv, p. 47. (in Ukr.)
5. Grinchenko, I. B., Kazmirchuk, A. P. & Polishchuk, S. B. (2012), “Features volleyball training process in terms of university”, *Materiali VIII Mizhnarodnoi naukovo konferentsii: «Problemi ta perspektivi rozvitku sportivnikh igor ta odnoborstv u VNZ», lyutiy 2012 r., m. Kharkiv* [Proceedings of VIII International scientific conference “Problems and prospects of development of sports in high school and odnoborstv”, February 2012 p., m. Kharkiv], KhGADI, Kharkiv, 33 p. (in Ukr.)
6. Lisyanskiy, V. K., Strelnikova, Ye. Ya. & Lyakhova, T. P. (2007), “The calculation of the model parameters volleyball players of different roles”, *Slobozans'kij naukovo-sportivnij visnik*, Vol. 11, pp. 108–113. (in Russ.)
7. Melnik, A. Yu. & Strelnikova, E. Ya. (2015), “The role of competitive activity in raising modern volleyball” *Problemi i perspektivy razvitiya sportivnykh igr i edinoborstv v vysshikh uchebnykh zavedeniyakh // Sbornik statey Kh mezhdunarodnoy nauchnoy konferentsii, 6 fevralya 2015 goda* [Problems and prospects of development of sports and martial arts in higher education // Collection of articles X international scientific conference, 6 February 2015], Belgorod – Kharkov – Krasnoyarsk, pp. 113–115. (in Ukr.)
8. Strelnikova, E. Ya. & Lyakhova, T. P. (2016), “Efficiency Action diagonal attacking players in the women’s volleyball”, *Slobozans'kij naukovo-sportivnij visnik*, No 2(52), pp. 112–116, doi:10.15391/snsv.2016-2.020 (in Ukr.)
9. Strelnikova, E. Ya. & Lyakhova, T. P. “Analysis of the achievements of women in the student volleyball teams Ukraine”, *Nauchnyy zhurnal po problemam fizicheskogo vospitaniya, sporta, rehabilitatsii i rekreatsii*, Tom No 1, pp.97–99, available at : <http://sportscience.org/index.php/health> (in Ukr.)

Received: 11.01.2017.

Published: 28.02.2017.

Information about the Authors

Yevgeniya Strelnykova: *Kharkiv State Academy of Physical Culture: Klochkivska str. 99, Kharkiv, 61058, Ukraine.*

ORCID.ORG/0000-0003-0010-6369

E-mail: zenastrel@gmail.com

Tamara Liakhova: *Kharkiv State Academy of Physical Culture: Klochkivska str. 99, Kharkiv, 61058, Ukraine.*

ORCID.ORG/0000-0003-4853-0513

E-mail: tamara.liakhova@yandex.ru