

## **ESTONIAN WOMEN'S NATIONAL VOLLEYBALL TEAM'S SUCCESS IN 2019 EUROPEAN CHAMPIONSHIP FINAL TOURNAMENT**

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### **ABSTRACT**

The aim of the article was to analyse the game success and tactics of the Estonian team in subgroup C of the 2019 European Championship final tournament in sets won and lost.

The subjects were the players of the Estonian volleyball team in the final tournament of the European Championship in 2019. The paper analyses Estonia's performance in five games of the European Championship: Hungary – Estonia, Croatia – Estonia, Romania – Estonia, the Netherlands – Estonia and Azerbaijan – Estonia. A total of 19 sets were analysed, four of which the Estonian national team won.

As a result, it was concluded that the Estonian volleyball team had higher efficiency indicators in all the four technical elements in the sets they won than in the sets they lost. Ball reception and serve efficiency differed less in the sets won and lost than attacking and blocking efficiency. Thus, it can be concluded that sets were lost mainly because of attack and block, not serve and reception.

The most efficient receiver (50%) in the Estonian women's team was K. Nõlvak.

The most efficient server (80%) was opposite spiker K. Moor.

In attack, the most efficient player was outside hitter A. Ennok (28%).

Estonia's setter J. Mõnnakmäe was the most efficient in blocking (24%). L. Kullerkann also performed at a very good level among middle blockers and collected the greatest number of blocks in the tournament (57).

K. Laak scored the greatest number of points in the championship (36 points).

**Keywords:** *volleyball; efficiency; women; championship*

## INTRODUCTION

In 2019, the Estonian women's national volleyball team could participate in the final tournament of the European Championship in Budapest. This was a special achievement for our team, as they reached the final tournament for the first time and had not had any opportunity to compete with the European top national teams before. To gain as much experience and benefit from the European Championship as possible, it was essential to record the games and players' efficiency. Using the recorded videos, the team could analyse the progress of the game afterwards, which contributes to both the players' and the coaches' expertise in the future matches. Several authors have found that complex analysis of technical elements performed by players and video recordings of the game enables coaches to give the players the most objective assessment and feedback after the game [1, 4, 6].

The information received during the game about the functioning of the tactical plan and performance of technical elements by the players is of essential value for both one's own and the opposite team [3, 5, 7].

The Estonian national team achieved the 24th place in the European Championship. This paper is concentrated on the efficiency of the Estonian women's national team by analysing the team's serve, serve reception, attack, and block. The efficiency indicators of technical elements were received from M. Sagar, statistician of the Estonian national team. Using the Data Volley program as required by the European Volleyball Confederation, he recorded all the games of the Estonian national team on the spot in Budapest. The article is based on the bachelor's thesis of K. Õun who is also one of the authors of the article.

Since 2000, Data Volley software has been the official statistical recording program of the European Volleyball Confederation [2]. The program has many different functions and can be used in real time. Attack charts and tactical drawings are compiled in cooperation between the video recording and the computer [8].

The aim of this study was to analyse the efficiency and tactics of the Estonian national team in sets won and lost in subgroup C in the final tournament of European Championship in 2019. The following tasks were set:

- To find the difference in performance of technical elements by the team in sets won and lost.
- To analyse the players' individual efficiency and to find the most proficient players of the Estonian national team during the championship at attack, reception of serve, serve, and block.

## **MATERIAL AND METHODS**

The study analyses the performance of Estonia in five games of the European Championship: Hungary – Estonia, Croatia – Estonia, Romania – Estonia, the Netherlands – Estonia and Azerbaijan – Estonia. All the teams played a total of five matches. The first place in subgroup C was won by the Netherlands, Azerbaijan was the second and Croatia the third. The Estonian women's national team achieved the sixth place in subgroup C, losing to all teams: Hungary – Estonia 0:3, Croatia – Estonia 3:1, Romania – Estonia 1:3, the Netherlands – Estonia 0:3, and Azerbaijan – Estonia 3:2. In total, 19 sets were analysed, four of which were won by the Estonian women's national team.

The Estonian national team was represented in Budapest by the following players:

- Setters – J. Mõnnakmäe and K. Bahmatsev
- Outside hitters – N. Peit, A. Ennok, K. Miilen, I. Kiisk and H. Pajula
- Tempo hitters – E. Peit, L. Kullerkann and E. Hollas
- Diagonal hitters – K. Laak and K. Moor
- Liberos – K. Nõlvak and N. A. Haidla

For data collection, the statistics program Data Volley 4, which is spread worldwide, was used [2]. Elements of game were recorded by M. Sagar, statistician of the Estonian women's national team, who was present at the final tournament. The statistics compiled by Data Volley gives an overview of the efficiency of the game elements performed by the women, the frequency of activities and the number of errors. The data of Data Volley 4 were transferred to the Microsoft Excel Office 356 program where the data were analysed.

## **RESULTS AND DISCUSSION**

### **Efficiency of the Estonian national team in sets won in the final tournament of the European Championship in 2019**

The Estonian national team played five games at the final tournament of the European Championship, during which 19 sets were played and 4 of them were won.

In the four sets won, the team performed 87 serve receptions. 69 serves received were served as floating serves and 18 as jump power serves. The team's efficiency at reception was 44%.

The results showed that the greatest number of receptions in sets won could be assessed as perfect receptions, which accounted for 30% of all receptions by the team. 21% of receptions were negative receptions when the ball immediately passed over the net, and 10% of receptions by the Estonian team were errors, or the opponents immediately scored a point.

The next technical element was the serve. In the 4 sets won, the Estonian team served 108 times, 96 were floating serves and 11 jump power serves.

The results show that the greatest number of serves (31%) could be assessed as positive. There were many weak serves (24%) where the opponents could use all their spikers in reception, but in the four sets won, our women also performed 10 ace serves, which made up 9% of serves.

The third element of the game was attack, which was performed 153 times in the four sets won; out of these 63 balls were high set into the corner and 24 quick sets into the corner. The efficiency of attack in the sets won by the team was 28%.

Most attacks could be assessed as positive (34%) or good (41%). There were few attack errors in the sets won; the team erred 9 times; thus, the frequency of attack errors was 6%, and 7% of attacks of the Estonian team were blocked by the opponents, which means that the opposing team immediately scored a point.

The fourth element of the game was blocking of attack, at which the women succeeded 55 times in the sets won. The efficiency of the Estonian team at block in the four sets won was 13%.

The results show that most blocks performed by the team could be assessed as positive (34%) or good (22%). Despite successful performances, there were also 16 block errors.

### **Efficiency of the Estonian national team in sets lost at the final tournament of the European Championship in 2019**

The Estonian national team played five games in the final tournament of the European Championship, during which 15 sets out of 19 were lost. Below, the efficiency of the Estonian national team at reception of serve, serve, attack and block will be analysed.

In the 15 sets lost, the team performed 314 serve receptions, out of which 281 serves were served as floating serves and 33 as jump power serves. The team's efficiency at reception was 42%, which is only 2 percentage points lower than in the sets won.

The results show that the difference between sets won and lost in reception was minimal. The most frequent assessment of reception was negative (25%), but the percentages of positive and perfect receptions were also good – 20% and 22% respectively. This allows us to conclude that sets were not lost because of serve reception.

The next technical element was serve. In the 15 sets lost, the Estonian team served 258 times; 228 serves were floating serves and 30 jump power serves. The efficiency of the Estonian national team at floating serve was 68% and at jump power serve 70%, or the total serve efficiency in sets lost was 69%.

The data show that in the sets lost the greatest number of serves could be assessed as positive (34%), but there were also many negative and weak serves – both 19%. In sets lost the efficiency of serve was 3 percentage points lower than in sets won.

The third element of the game was attack, which was performed 441 times in the sets lost; out of these 165 balls were high sets and 64 quick sets. The team's efficiency of attack in sets lost to the opponents was 8%. If in the case of the previous elements of the game, the difference in efficiency between the sets won and lost was minimal, the efficiency of attack was 20 percentage points lower in the sets lost.

According to the data, attacks could be assessed as positive and good 150 and 123 times respectively, which comprised 62% of all the attacks. But in sets lost, the attacks where a point was lost (weak and blocked attacks) made up 20% of the attacks.

The last element of the game was blocking of attack, at which the women succeeded 156 times in the sets lost to the opponent. The efficiency of the Estonian team at block in the sets lost was 6%, which was considerably lower than in the sets won where it was 13%.

Statistics shows that most frequently blocking could be assessed as block error (32%). But reception assessed as good and positive occurred in 19% and 23% of cases, respectively. It can clearly be stated that in the sets lost the block of the team did not function as efficiently as in the sets won. In the sets lost the efficiency was 7 percentage points lower.

### **Analysis of games of the Estonian national team. Most successful performers of technical elements in sets won and lost**

Serve reception plays a great role in the game. Serve reception in Budapest showed that the Estonian national team was somewhat more efficient in the sets won. The mean efficiency in sets won was 44%, which is 2 percentage

points better than in the sets lost. This depended on the number of errors; in sets won the percentage of errors was 10%, which was 3 percentage points lower than in sets lost, and the assessments of reception in sets won were better.

Serve is the crucial element at scoring a point, as playing for each point begins with a serve. In sets won, efficiency was better, as 2 percentage points more ace serves were hit, and there were 6 percentage points fewer serve errors.

Success at attack reflects the joint activity of the whole team. Despite the individuality of attack, it is preceded by cooperation within the whole team, and usually the team whose attack is more powerful wins the game. The Estonian volleyball team's mean efficiency indicator of attack (28%) was higher in the sets won. In the sets won the mean indicator of the team was 20 percentage points higher. The great difference in the efficiency indicator resulted from the attacks where a point was directly won. In sets won there were 13 percentage points more of them, and there were 2 percentage points more of serve errors in sets lost.

The teams playing at a high level differ from one another mainly in block. The efficiency of the Estonian national team at block was higher in sets won (13%). In sets won the mean indicator of block efficiency was 7 percentage points higher.

Among the outside hitters, the most proficient at serve reception was A. Ennok whose efficiency indicator was 48% and who performed a total of 133 receptions in sets won and lost.

The most proficient outside hitter at serve was K. Miilen. She served 41 times at the tournament with the efficiency of 76%, which was 6 percentage points higher than the efficiency of the whole team at serve. The Estonian team had a good efficiency indicator at the tournament. The authors of the current study would point out three outside hitters who were very good at serve, as the differences in their efficiency were minimal.

At attack, the most efficient player of the Estonian national team at the European Championship was A. Ennok whose efficiency indicator at attack was 28%. The efficiency indicator of the whole team at attack was 13%, which shows that her efficiency was 15 percentage points higher than the mean of the team. Although A. Ennok was the most efficient, the authors also noticed N. Peit who scored the greatest number of points (29 points) at attack among outside hitters.

Among the tempo hitters, the most efficient at the European Championship in sets lost and won was E. Peit whose efficiency indicator was 66% and who performed 29 serves at the tournament.

Among the middle blockers of the Estonian team, the most proficient at attack was L. Kullerkann whose efficiency at attack was 15% and who performed 62 sets. Her efficiency at attack was 2 percentage points higher than the mean of the team.

The mean efficiency of block of the Estonian team at the European Championship was 8% (211 blocks). Among middle blockers, we can again acknowledge L. Kullerkann who blocked the opponent 57 times. Her efficiency indicator was 19%, which was 11 percentage points higher than the mean of the team. Among the tempo hitters, the authors of the paper noticed namely her, as she was highly successful at block and proved her efficiency at the championship.

Among the diagonal hitters, the most proficient at the European Championship in sets lost and won was K. Moor whose efficiency indicator was 80% and who could perform 17 serves.

At attack, the most efficient among the diagonal hitters of the Estonian team was K. Laak whose efficiency indicator at attack was 13%, who performed 151 sets and scored 32 points from them. K. Laak's efficiency at attack was equal to the mean efficiency of the team.

At block, the most efficient Estonian national team member was K. Laak whose efficiency indicator was 4% and who performed 30 blocks at the championship. The diagonal hitter's efficiency at block was 4 percentage points lower than the mean indicator of the team.

In the authors' opinion, K. Laak showed great promise at the championship despite her young age (19 years). She kept a cold head in difficult situations, as a diagonal hitter must do. She proved that she was one of the European top players, scoring the team's greatest number of points at attack (32 points).

Among the setters under analysis, the Estonian national team member J. Mõnnakmäe participated in the whole tournament. Her efficiency indicator at the final tournament of the European Championship was 78%; she performed 55 serves. The efficiency of her serve was 8 percentage points better than that of the mean of the team, as the team's mean efficiency indicator at serve was 70%.

At block, J. Mõnnakmäe's efficiency indicator during the whole tournament was 24%; she performed 38 blocks at the championship. With this efficiency indicator, Mõnnakmäe surpassed all her teammates, as her efficiency indicator was 16 percentage points higher than the mean indicator of the team.

The most proficient libero at the European Championship was K. Nõlvak whose efficiency at reception was 50% and who received 94 serves during the

tournament. She proved to be the most efficient receiver in the team, surpassing the mean efficiency indicator of the team by 8 percentage points. Definitely, N. A. Haidla should also be mentioned; at the age of 17 she could play at a very important tournament for the first time and coped well with it.

The study revealed that the greatest number of points at the final tournament of the European Championship was scored by K. Laak (36 points). At attack, she scored 32 points and in block 4 points.

According to the aims set for the study, the following conclusions can be drawn:

The study showed that, in the sets won, the Estonian national volleyball team had higher efficiency indicators in all four technical elements than in the sets lost. The efficiency of reception of serve and serve in sets won and lost differed less than the efficiency of attack and block. Thus, it can be concluded that sets were lost mainly because of the low efficiency of attack and block, not because of serve and serve reception.

The most efficient player of the Estonian team at serve reception was the libero K. Nõlvak (50%).

The player with the highest efficiency indicator at serve was the diagonal hitter K. Moor (80%).

The most efficient player at attack was the outside hitter A. Ennok (28%).

The setter of Estonian national team J. Mõnnakmäe was the most efficient at block (24%). J. Kullerkann should also be mentioned, as she played very well as a middle blocker and gathered the greatest number of positive block touches during the tournament (57).

The greatest number of points during the Championship was scored by K. Laak (36 points).

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