

EFFICIENCY AND ANALYSIS OF THE SHOOTING OF THE MEN'S 3X3 BASKETBALL TEAMS AT THE OLYMPIC GAMES-PARIS 2024

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Abstract: Basketball 3x3 has consolidated its reputation as an attractive and fascinating sport at the 2024 Paris Olympics. Among the eight men's participants in Paris, three teams from the Tokyo Olympics (Japan, Russian Olympic Committee and Belgium) were missing. In their place, those of the USA, Lithuania and France (host) qualified. The game system was maintained from the previous Olympics - eight teams, playing each against each other. After qualifying in the group, in the elimination phase, the first two teams rest. The last two teams are eliminated from further participation. The quarter-finals are between the 3-6 and 4-5 teams from the classification in the first phase. The semi finals are between the first in the group and the winner of the match between 4 and 5 teams and between the second in the group and the winner of the match between 3 and 6 teams. The winners play in the final, and the losers play for the bronze medal. With the conducted research, we want to present to the audience the synthesized results of the shooting accuracy of the participating eight men's teams from the three positions - for one and two points, as well as the success rate when executing shooting free throws. The average performance per match of each team was established with the place in the final ranking in the preliminary (group) phase and the final ranking of the Olympic Games, and we made the corresponding analyses and conclusions. The number of attempts made and the number of successful shots were established, as well as the percentage of successfully realized points for each of the three zones separately and the total success rate of shooting of the men in percentage. The results between the participating teams were compared, the final ranking was analyzed according to the results obtained. We calculated the average age and average height of each participating team and made the corresponding conclusions after the final ranking.

Keywords: basketball 3x3, successful shooting, percentage, Olympic Games-Paris'24

1. INTRODUCTION

After its impressive debut as an Olympic sport in Tokyo 2020, 3x3 basketball continues to gain popularity and is establishing itself as a dynamic and spectacular discipline at the Paris 2024 Games. The achievement for the game is the choice, and in a short time, of the International Olympic Committee to include 3x3 basketball in the program of the Tokyo 2020 Olympic Games. This historic moment for 3x3 basketball occurred at an IOC session in June 2017 (Stavrev, 2022). Apparently, the fact that 3x3 basketball is at the Olympics directed forces, funds and attracted capacities to work on improving the competitors themselves, as well as enriching the methodological tools. In the interest of fairness, it is fair to say that there was almost no change in the rules of the game between the two Olympiads. Mitreva (2013) and Stavrev (2016) analyze in detail the rules of 3x3 basketball, comparing some of them with those of classic basketball. The study was conducted in order to present summarized data on the shooting of the teams at the Olympic Games in Paris '24 and to conduct analyses to help athletes and coaches in the preparation of their teams. In a study by Stavrev (2022) with coaches and athletes, the area behind the 2-point arc stands out as the preferred one. This shooting is also the one with the greatest weight for efficiency and psychological advantage over the opponent. Petrov & Bonev (2020) recommend more targeted work on the detection of passing between players in aggressive defense, improving one-on-one play, shooting the basket with a rebound behind the arc for 2 points, and playing with the ball in cover (pick and roll). Studies aimed at revealing the priority elements of the game and guidelines for preparation are revealed by Stavrev (2020a) and Stavrev (2020b), paying special attention to shooting during the game. An analysis of the success rate of shooting in 3x3 basketball at the Tokyo 2020 Olympic Games is made by Stavrev (2021). The author finds that the success rate of shooting is a very important factor in the success of the team, but it is not the only one. The physical endurance and mental resilience of the players are indicated as significant qualities for success. Stavrev (2022) compares some statistical indicators of the men's and women's 3x3 basketball teams from the Tokyo Olympics. The author found that in all shooting indicators studied, men outperform women in terms of success, with the largest difference (by 11.2%) in 1-point shooting. He concluded that shooting success is a crucial factor in the success of teams and that it is advisable to improve the methodologies and methods of shooting preparation, by devoting more time to preparation. Stavrev (2021) examines the specific characteristics of 3x3 basketball players. Outstanding shooters are needed in the lineups. Especially considering the importance of a basket scored behind the 2-point line, good shooters from this

zone are extremely valuable. The same applies to players with a special sense of placement and success in the fight under the basket. It is interesting to note that at the Tokyo 2020 Olympic Games for women, the first four places in the final standings were occupied by teams whose members included a player with a height of 190 centimeters and more. This is not found as a dependence in men's teams. Research on the shooting of participants in the Paris 2024 Olympic tournament will direct towards new methodologies and programs for training coaches and managers, as well as to focus on the most significant shooting zones for success.

2. AIM

The objective of our study is to establish and analyze the shooting results of the men's teams participating in the Olympic Games in 3x3 Basketball in Paris 2024 and to draw the necessary conclusions and recommendations.

3. TASK

To analyze the system of holding, the group phase and the elimination phase of the Olympic Tournament in 3x3 Basketball in Paris 2024;

To establish the total number of shots and successful ones of the men's teams from three zones - for 2 points, for 1 point and from the penalty line and analyze the results;

To indicate the best shooters and what is the ranking of their teams;

To study some relationships between the number of shots and successful ones of the teams with the ranking in the group and in the final ranking of the Olympic Games-Paris 2024.

4. METHODOLOGY

To realize the goal and tasks, we researched literary sources, electronic websites and official protocols of the Men's 3x3 Olympic Basketball Tournament in Paris' 2024, used video surveillance of the matches, obtained expert evaluations, and systematized and analyzed the results (<https://olympics.com/en/paris-2024/schedule/3x3-basketball/men>). The Olympic Men's 3x3 Basketball Tournament in Paris 2024 was held from July 30 to August 5, 2024 at 1 Place de la Concorde Paris, France.

5. ANALYSIS OF THE RESULTS

For the Olympic finals in Paris, after a series of qualifications, 8 teams qualified. The system of holding is the same as the games in Tokyo. The teams form one group, in which the game is played according to the round-robin system. Initially, all teams played 7 matches. The last two teams, in this case the USA - who took 7th place in the group and China - who took 8th place, are eliminated for the next phase of direct eliminations (<https://olympics.com/en/paris-2024/pool/3x3-basketball/men>). Table 1 shows the ranking in the group, after the first stage of the tournament - round-robin, the average height of each team, the average age of the teams and the final ranking of the Olympics. In a previous study (Stavrev, 2021), when analyzing the shooting success rate of the men's teams in the Olympic Games in Tokyo' 2020, the indicators of average height and average age of the teams were not analyzed. The first Olympic champion, Latvia, topped the standings after playing the matches in the group stage. The second phase includes quarter-final matches, between the 3rd place team and the 6th place team in the group (Lithuania vs. Poland) and between the 4th and 5th place teams (Serbia and France). The first two teams (Latvia and the Netherlands) qualify directly for the semi-finals. Latvia was to play the winner of the match between Serbia and France, and the Netherlands against the winner of Lithuania and Poland. It is worth noting that the teams of Japan, the Russian Olympic Committee and Belgium dropped out of the participants of the Tokyo 2020 Olympics for Paris 2024. In their place, those of the USA, Lithuania and France (host) qualified. It is important to note that in a direct clash, the fifth-placed home team eliminated Serbia (4th in the group) and qualified for the semi-final against Latvia, defeating them. In the other semi-final, the teams of the Netherlands and the team of Lithuania, which eliminated the Polish team, met. Latvia and Lithuania lost their semi-final matches and played for the bronze medal of the games, won by Lithuania. The Netherlands and France reached the gold medal match. The shooting indicators of the two teams in the final match are entirely in favor of the winning team. The Netherlands is 73%, against 53% for France for the 1-point shooting. The percentages for shooting from the 2-point zone are 17% against 14%, respectively, and those from the penalty line are 75% against 67%. The success rate for the total number of shots is 52% for the Netherlands against 40% for France. Despite the apparent advantage in successful shooting from all positions for the Netherlands, the match was extremely equal and the match was decided after overtime. Thus, the team with the highest average age in the tournament (33.6 years) consisting of Jan Driessen, Dimeo van der Horst, Arvin Slagter and Worthy de Jong was decorated with the gold medals of the Paris 24 Olympic Games, and the youngest team France (average age 26.9 years) the vice-champion title, which is a peculiar curiosity of the tournament. Proof of excellent preparation and the incredible physical and mental endurance of the athletes of the Netherlands and

France, as the final was the 10th match for the young team of the hosts. In terms of height, the average values of all teams are close, ranging from 195.8 to 199.3 (see table 1).

Table 1. Final group standings, average height and age of teams and final standings at the Olympic Games-Paris' 2024

Final group ranking	Team	Average height of the teams in cm	Average age of the team	Final classification - OG in Paris' 2024	Team
1	Latvia	197,5	29,0	1	Netherlands
2	Netherlands	196,3	33,6	2	France
3	Lithuania	197,0	32,7	3	Lithuania
4	Serbia	199,3	32,3	4	Latvia
5	France	197,8	26,9	5	Serbia
6	Poland	198,0	31,6	6	Poland
7	USA	195,8	32,9	7	USA
8	China	198,3	27,7	8	China

Source: <https://fiba3x3.com/2024/olympics/teams/men/autors>

Analyzing the results of the shooting of the men's teams, it is correct to specify that the number of matches played by the teams varies from 7 to 10 matches. This, in turn, affects the physical condition and highlights the excellent physical preparation of some of the teams. In Table 2, we have indicated the number of shots and successful ones from the three zones – for 2 points, for 1 point and shooting from the penalty line and the percentage of successful ones. In the last column, the total number of shots for each team throughout the tournament (with the specification of the difference in the number of matches), the successful ones and their percentage expression are calculated.

Table 2. Total number of shots and success rate of the teams when shooting from different positions

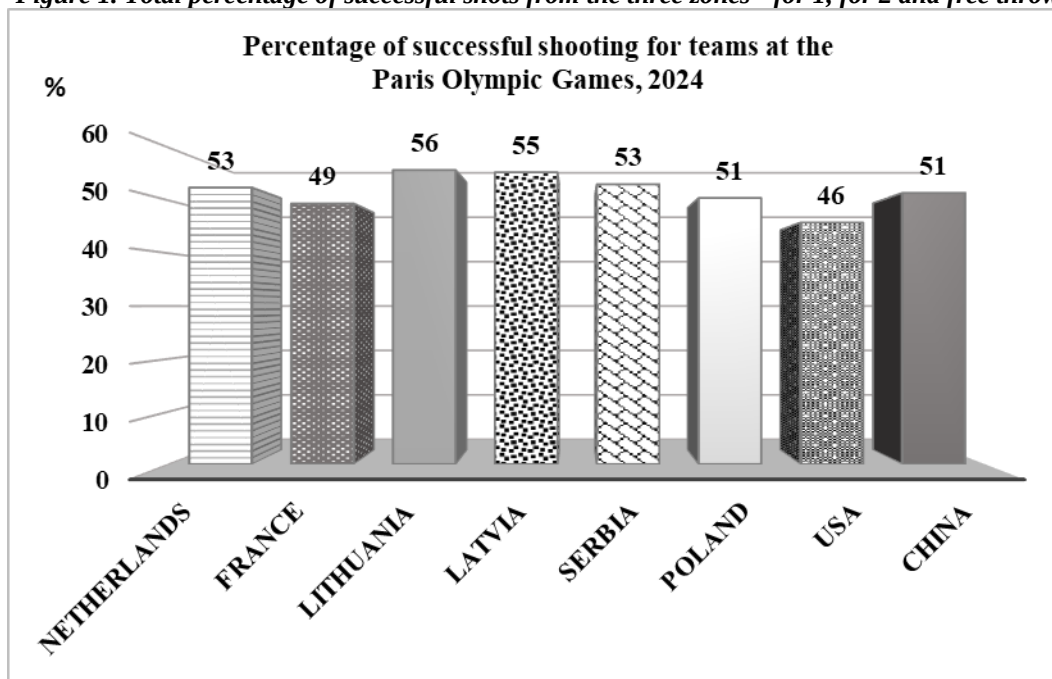
Final classification - OG in Paris' 2024		Games Played	Point per game-average	Number of attempts, successful 2-point, 1-point and free throws, total team shots and percentage							
				2-point	%	1-point	%	Free Throw	%	Total/ Successful	%
1	Netherlands	9	19,0	98/24	24	141/96	68	41/27	66	280/147	53
2	France	10	18,8	108/30	28	137/82	60	36/27	75	281/139	49
3	Lithuania	10	18,2	88/26	30	134/89	66	27/23	85	249/138	56
4	Latvia	9	20,2	130/44	34	113/79	70	26/15	58	269/149	55
5	Serbia	8	18,6	77/23	30	94/66	70	21/18	86	192/102	53
6	Poland	8	16,7	70/18	26	102/64	63	24/17	71	196/99	51
7	USA	7	16,6	84/22	26	98/54	55	23/18	78	205/94	46
8	China	7	15,3	72/19	26	82/53	65	17/16	94	171/88	51

Source: <https://olympics.com/en/paris-2024/schedule/3x3-basketball/men/autors>

The average score of each team per match (table 2) ranges from 20.2 points for the Latvian team to 15.2 points per match for the Chinese team - logically ranked last in the final standings. The most attempts to shoot from the 2-point zone were made by the Latvian team (130), with 22 fewer attempts by France (108), who finished as runners-up. The third place in terms of the number of shots from this zone is the Netherlands team (98). The Netherlands and Latvia have one match less (9) than the French team. An interesting fact is that at the previous Tokyo 2020 Olympics, the Latvian and Dutch teams were in the same positions in terms of the number of shots from the 2-point zone. The Latvian team, which finished first in the group, had the most attempts to shoot from the 2-point zone (130), but in the final standings it finished in fourth place. In this case, we attribute the first place at the Olympics to the Netherlands, in addition to the exceptional physical preparation and endurance, as well as the largest number of

shooting attempts from the 1-point zone (141) with 68% of the successful ones and the largest number of completed free throws - 41 for the Netherlands (with 66% successful). The latter indicator (41/27 for the Netherlands and 36/27 for France) reveals a very aggressive game in attack, with a constant search and execution of attacks on the move towards the basket, which is why the competitors are stopped at the cost of fouls. This is also indicative of a high level of technical and tactical preparation of these 2 teams. When considering the total number of shots and successful ones, the champion and vice-champion teams have almost the same total number of shooting attempts - 280 and 281 shots. They differ significantly in terms of success rate, respectively 53% for the Netherlands (with one match less) and 49% for France with 10 matches. The percentages of successful shots of the teams vary in the range from 46% for the USA to 56% for Lithuania. The first 4 places are occupied by teams with a total number of shots for the tournament in the range from 249 to 281. The fifth in the ranking has a total of 192 shots, although the success rate is equal to that of the champions 53% (table 2). We will look at the performance of the Olympic champion from Tokyo, the team of Latvia. After 7 victories in the group stage, the team lost the matches in the semi-final and the one for the bronze medals, despite its shooting indicators: the most points on average per match (20.2); the most attempts to shoot from the 2-point zone (130) and the highest percentage of successes (34%); highest percentage for shooting from the 1-point zone (70) together with the Serbian team. In the penalty kicks, the Latvian team has the lowest success rate (58%). Analyzing the results, we attribute the retreat from the group stage of the Latvian team to weaker physical endurance and fatigue in the last 2 matches. In Figure 1, we have shown the overall success rate in shooting (2-point shooting, 1-point shooting and shooting when executing penalty kicks) of each of the eight men's teams participating in the Paris 2024 Olympic Games in percentages.

Figure 1. Total percentage of successful shots from the three zones - for 1, for 2 and free throw



Source: authors

Table 3 shows the average number of shots and the successful ones, as well as the average percentage per match for each team. In the 2-point shooting, the high number of attempts per match for the Latvian teams is impressive: 14.4 shots, of which 4.9 were successful (34%). They are the only ones to finish undefeated in the group with 7 wins, but they lost the remaining 2 matches. The USA team is second in this indicator and has an average of 12 shots per match with 3.1 successful (26%), but the group ranking is 7th place, with 2 wins and 5 losses and they do not advance. The third team with the highest average number is the Dutch team with 10.9 shots, of which 2.7 were successful (24%). They finished with 5 wins and 2 losses and were in second place in the group stage, but they won the remaining semi-finals and final. The average number of shots per game from the 2-point zone by the teams ranged from 14.4 (LAT) to 8.7 attempts for Poland. The success rate ranged from 34% for Latvia to 24% for the Netherlands. From the 1-point zone, the teams with the highest average number of shots per game are the Netherlands (15.7/10.7 attempts/successful), the USA (14/7) and France (13.7/9.2). In terms of average free throws

made and converted per game, the top 3 teams are as follows - the Netherlands with 4.5/3.0, France with 3.6/2.7 and the USA with 3.3/2.6. In terms of total number of shots per game from all positions, the Netherlands team with the highest number is 31.1 shots, followed by the Latvian team with 28.1 shots and the USA team with 29.3 shots per game. The USA team takes a significant number of shots per match, but the success rate is the lowest (46%) of all participating teams (Table 3).

Table 3. Number of shots and success rate of teams shooting from different zones on average per match and total number and percentage of successful shots for match

Final classification - OG in Paris' 2024		Games Played	Average number of attempts and successful shots per game for 2, 1 points and free throws per game and percentage successful							
			2-point	%	1-point	%	Free Throw	%	Total/ Successful	%
1	Netherlands	9	10,9/2,7	24	15,7/10,7	68	4,5/3,0	66	31,1/16,4	53
2	France	10	10,8/3,0	28	13,7/9,2	60	3,6/2,7	75	28,1/14,7	49
3	Lithuania	10	8,8/2,6	30	13,4/8,9	66	2,7/2,3	85	24,9/13,8	56
4	Latvia	9	14,4/4,9	34	12,5/8,8	70	2,9/1,7	58	29,9/16,5	55
5	Serbia	8	9,6/2,5	30	11,7/8,2	70	2,6/2,2	86	24,0/12,7	53
6	Poland	8	8,7/2,2	26	12,7/8,0	63	3,0/2,1	71	24,5/12,4	51
7	USA	7	12,0/3,1	26	14,0/7,7	55	3,3/2,6	78	29,3/13,4	46
8	China	7	10,3/2,7	26	11,7/7,6	65	2,4/2,3	94	24,4/12,6	51

Source: <https://fiba3x3.com/2024/olympics/stats/men/teams/authors>

We will quite rightly give recognition by indicating the best shooters, participants in the 3x3 basketball tournament at the Olympic Games in Paris '24. Table 4 shows the three best for each studied position. For shooting from the 2-point zone with the highest success rate of 50% is the Pole Filip Matczak. But his result was obtained in only 4 attempts. In 2nd and 3rd position in the ranking from the 2-point zone are Francis Lacis (POL) with 44%, but from 25 attempts made and Arvin Slagter (NED) with 42% from 24 shots in the tournament. From the 1-point zone, the first 3 places are as follows: Marco Brankovic (SRB) with 81% with a total number of shots in the tournament of 21, Dejan Majstorovic (SRB) with 18 shots and Nauris Miežis (LAT) with 23, with the same success rate of 78%. According to the latest indicator for free throws, there are 10 players with a 100% success rate. We have identified three players who have the highest number of free throws completed (Table 4).

Table 4. The top 3 shooters at the Paris' 24 Olympic Games from each of the three zones

COMPETITORS WITH THE BEST SHOOT SUCCESS PERCENTAGE AT THE PARIS 2024 OLYMPIC GAMES (two-point, one point and Free Throw)											
2-point Shooting Percentage				1-point Shooting Percentage				Free Throw Shooting Percentage			
Name	Team	Total/ Successful	%	Name	Team	Total/ Successful	%	Name	Team	Total/ Successful	%
Filip Matczak	POL	4/2	50	Marco Brankovic	SRB	21/17	81	Aurelijus Pukelis	LTU	11/11	100
Francis Lacis	LAT	25/11	44	Dejan Majstorovic	SRB	18/14	78	Jiaren Zhao	CHN	8/8	
Arvin Slagter	NED	24/10	42	Nauris Miežis	LAT	23/18	78	Marco Brankovic	SRB	6/6	

Source: <https://fiba3x3.com/2024/olympics/stats/men/players>

The last indicator that we will show is the most points scored on average per match for the entire tournament (table 5). The athlete from the USA team Canyon Barry has the most points scored on average per match – 8.4 points. His total shooting result is 90 shots with 48 successful from all positions and a success rate of 53%. This result is quite high and achieved in 7 matches played, after which the team is eliminated from the next phase, taking 7th place in the group. In 2nd place in the individual competition for points scored per match is Karlis

Table 5. Player with the most points scored in the Olympic 3x3 basketball tournament-Paris' 24

POINT PER GAME			
№	Name	Average	Team
1	Canyon BARRY	8,4	USA
2	Karlis LASMANIS	7,4	LAT
3	Worthy de JONG	7,2	NED

Source: <https://fiba3x3.com/2024/olympics/stats/men/players>

Lasmanis (LAT) with an average of 7.4 points per game, in 9 games played. His overall shooting score is 103/54, which is a 52% success rate. Third in the ranking is Worthy de Jong (NED) with an average of 7.2 points per game, in 114/55 made/successful and a 48% success rate. These players not only demonstrated exceptional shooting skills, but also contributed significantly to the successes of their teams.

6. CONCLUSIONS AND RECOMMENDATIONS

The system of conducting the Olympic 3x3 basketball tournament is extremely demanding, with a large number of matches in a short period and requires excellent physical training and endurance from the competitors;

The first four places in the final standings are occupied by teams that make a much larger number of shots than the other teams (from all positions), regardless of the low success rate;

The number of free throws taken is indicative of an active and aggressive offensive game, from which the conclusion follows that in order to make attacks on the basket, the competitors have excellent technical preparation and execute tactical instructions, which are a factor for a higher ranking of the teams;

In the ranking of the three most successful shooters of the Olympic 3x3 basketball tournament from each position, there are no players from the finalist teams, with one exception in 3rd place in the 2-point shooting. In the top four teams, the points in the match are distributed evenly among the players, which means that the players are equal and the playing time and workload is distributed among all;

Special attention should be paid to physical endurance, rapid shooting and shooting on the move towards the basket.

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