



Technical Analysis of Chinese Men's Basketball 3X3 Defeat in Tokyo Olympic Games Based on Statistical Analysis of Internet Data

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Abstract. Using the methods of video analysis and mathematical analysis, the data of the men's 3X3 basketball match in Tokyo Olympic Games between China and Serbia, Russia, Latvia, the Netherlands and Japan were statistically analyzed, and the factors of China's failure were discussed. The results show that the Chinese team has a prominent advantage in the inside line, but it is poor in the consciousness of protecting the rebound, the intensity of confrontation, the physical ability, the tactical attack and defense are single, the lack of stable outside two-point scoring, and the turnover rate is serious. It is suggested to formulate corresponding training countermeasures according to the deficiencies of the Chinese team, strengthen the confrontation exercises and physical training of the players, reduce mistakes, improve the outside two-point shooting percentage, and learn from the pick-and-roll and screen exercises of other countries for people without the ball, so as to enrich the offensive tactics.

Keywords: Internet big resources · Tokyo Olympics · 3X3 basketball

1 Introduction

After more than a century of spectacular development, basketball has now become an important part of professional sports. With the increasing number of basketball equipment in social public areas, a large number of basketball fans flood into the streets to participate in basketball, forming different forms of basketball [1, 2]. Among them, 3X3 basketball has become the most popular form of street basketball. Since 2007, when FIBA revised the rules for 3X3 basketball, 3X3 basketball has gradually begun to develop into sports venues. Since 2012, 3X3 basketball has held a variety of events, such as: 3X3 Basketball World Cup, tour, major international events have also attached importance to this new project. At present, 182 countries around the world have participated in 3X3 basketball, and 3X3 basketball is in a booming stage. At the Tokyo Olympics, the 3X3 basketball game was officially included in the Olympics for the first time.

The rules of 3X3 basketball match are different from the system of five-a-side basketball match. 3X3 basketball match is only played in a half court, with a ball frame, and

4 players (3 starters and 1 substitute) from each team participate [3]. The game usually lasts for 10 min, and there are two ways to win. One is the regular game lasts for 10 min, and the team with the highest score wins. The first team to score 21 points wins. If the score is tied at the end of time, then extra time is played and the first team to score two points wins. Both teams will have a 1 min break before the deciding period begins. The first team to score 2 points in the deciding period wins. In 3X3 basketball, the shot clock is only 12 s, half the time of a normal basketball game. 3X3 basketball match is different from the traditional five-a-side basketball match. 3X3 basketball match will not only end in the way of time running out, but also end in the way of winning the first 21 points. This diversified outcome undoubtedly adds more suspense and enjoyment to the match. Another feature of 3X3 basketball game is that the transition between offense and defense is very fast. Since there is no baseline serving process, 8–10 attempts to the basket may occur in just one minute [4]. Continuous attack for players, is the fitness and face the double challenges of judgment, games in the both offensive and defensive tactical derived flowers posture, the game of basketball, fast changing tactics are colorful and practical, but in the 3 x3 basketball competition rules without the coach to guide players on the court, Every decision has to be made by the player himself. Therefore, on the 3X3 basketball court, there are higher requirements for players to master certain basketball skills and timely reflection ability, and to make relatively correct decisions and adjustments in the case of whether it is appropriate or not to enlarge their score advantage [5, 6].

This paper aims at the technical analysis of the 5 games of the Chinese team in the 3X3 men's basketball match of the Tokyo Olympic Games, analyzes the factors of the failure of the Chinese team from a multi-dimensional perspective, and puts forward the countermeasures to solve the failure.

2 Materials and Methods

2.1 Approach

This paper takes the factors of the five games in which The Chinese team lost in the men's three-man basketball match in the 2021 Tokyo Olympic Games as the research object, namely, the five games in which the Chinese team played Serbia, Russia, Latvia and The Netherlands and Japan respectively.

2.2 Research Methods

1) Video analysis

Watching the video replay of the men's three-on-three basketball match in Tokyo Olympic Games on the Internet, this paper analyzes the characteristics of the three-on-three basketball attack and defense and analyzes the factors of the failure of the Chinese team in the three-on-three basketball match in this Olympic Games.

2) Mathematical statistics

Using the Internet to search the technical parameters of the Chinese team and Serbia team, Russian Olympic team(ROC),Latvia team, Netherlands team and Japan team, collate the collected technical data of the game, use computer software to analyze and summarize the data, in order to find out the factors of the failure of the Chinese team to provide a detailed basis.

3 Results

3.1 Analysis of Factors of Chinese Team’s Defeat Against Serbia Team

1) Basic information of Chinese and Serbian team players

Table 1 shows that in terms of average age, the Chinese team is relatively young; From the height, the average height of the Chinese team is 197.5 cm, the average height of the Serbian team players is 196 cm, although there is little difference in the average height of the two teams, but the height gap of the Chinese team players is slightly larger, showing a discrete state. Superficially, the positions of Chinese players are obvious, including guard, forward and center, showing strong mobility, fast breakthrough speed and high shooting percentage [7]. However, the height of The Serbian team is above 196 cm, and there are only striker and center in the traditional player positions. Due to the limitation of height and weight, the movement speed of the Serbian team is slower than that of the Chinese team, but it is better than the Chinese team in the competition [8]. Combining with the video game understands, Hu Jinqiu height advantage obviously, held inside advantage, but high rock poetry 187 cm height in a weak position in the competition, the Chinese team in the face of Serbia, with an average age of 31, but can’t play advantage to impact, both score and confrontation and draw fouls, there is a larger gap with each other.

2) Technical statistical analysis of Chinese team and Serbia team

Table 2 shows that Chinese lost the game 13–22. Serbia grabbed 8 defensive rebounds actively, while Chinese’s awareness of rebound protection was relatively weak. In terms

Table 1. Basic information of players of Chinese and Serbian teams

Chinese Team player Information				Player information for Sylvia			
name	age	Height	score	name	age	Height	score
Peng Yan	25	198 cm	4	Aleksand ar RATKOV	29	194 cm	3
Shiyan Gao	25	185 cm	2	Dejan MAJSTO ROVIC	33	200 cm	4
Haonan Li	22	197 cm	1	Mihailo VASIC	28	199 cm	4
Jingiu Hu	23	210 cm	6	DusanDOMOVIC BUIUT	35	191 cm	11

Table 2. Technical statistics of the match between Chinese and Serbia

Chinese	Technical statistics	Serbia
13	Overall score	22
5	Defensive rebound	8
3	assists	4
3	blocking	1
2	Block Shot	3
0	foul shot percentage	100%
12	1 point shot attempts	22
58%	1-point FGs	59%
9	2 point shot attempts	9
33	2-point FGs)	33
8	Turnover	6

* Note: One point is scored from inside the three-point line, and one point is scored from outside the three-point line

of fouls and free throws, as well as the free throw percentage, Chinese committed more fouls, while Serbia did not commit more than six fouls until the end of the game, giving Chinese too few free throws, and Chinese did not hit a free throw, while Serbia's free throw percentage was as high as 100%. In terms of turnovers, Chinese and Serbia made 8–3 turnovers, 19 percent more than Serbia.

3.2 Analysis of Factors of Chinese Team's Defeat Against ROC Team

1) Basic information of Chinese and ROC players

Table 3 shows that there is little difference between the age and average height of the Chinese and ROC. The minimum height of the Russian team is 191 cm, and the minimum height of Chinese team is 185. In the score, Chinese team mainly rely on Peng

Table 3. Basic information of players of Chinese and ROC

Chinese Team player Information				ROC Player information			
name	age	Height	score	name	age	Height	score
Peng Yan	25	198 cm	5	Stanislav SHAROV	26	191 cm	1
Shiyan Gao	25	185 cm	1	Alexand er ZUEV	24	193 cm	12
Haonan Li	22	197 cm	1	Kirill PISKLOLV	24	204 cm	6
Jingiu Hu	23	210 cm	6	Ilia KARPEN KOV	24	192 cm	2

Table 4. Technical statistics of the match between Chinese and roc

Chinese	Technical statistics	Serbia
13	scoree	21
8	Defensive rebound	12
6	assists	3
2	blocking	1
1	Block Shot	0
2/50%	Free throws/ FGs	4/50%
17/59%	1 point shot attempts/ FGs	19/58%
10/10%	2 point shot attempts/ FGs	9/44%
2	Turnover	2
13	foul	11

Yan and Jinqiu Hu as the main, the ROC team mainly by Alexander ZUEV individual score, from the game can be seen that the Chinese team did not limit Alexander ZUEV player's individual score.

2) Technical statistical analysis of Chinese team and ROC team

Table 4 shows Chinese's huge loss in defensive rebounds and 2-point shooting percentage, respectively. Chinese lost 4 possessions of offense in defensive rebounds, while ROC gained 4 possessions. Chinese's Jinqiu Hu was the tallest player in the game. The defensive rebounding was not well controlled in the case of the height advantage, but gave the ROC team more opportunities on the rebound, resulting in a certain disadvantage. On 2 quarters, owing to three on three basketball the area small, fast offensive rhythm of the game, players usually use man-to-man tactics, in the breakthrough player would double defense to limit opponents score, and want to get the three points scoring opportunities within the line would be easy to excessive energy consumption, and outside the three-point line score can be achieved in three on three basketball game two opportunities, In addition, it does not require too much physical consumption. Through conversion, it can be known that a 3-point shot is equal to nearly two shots scored within the 3-point line. In most cases, the 3-point hit rate is the key to determining the outcome of the game [9]. Chinese scored only one of its 10 2-point attempts, a six-point gap compared to Russia, which made four of its nine attempts.

3.3 Analysis of Factors of Chinese Team's Defeat Against Latvia Team

1) Basic information of Chinese and Latvia players

Table 5 shows that the average age of the Chinese team is smaller than that of the Latvian team. In absolute height, Chinese team must occupy certain advantage. It can

Table 5. Basic information of players of Chinese and Latvia

Chinese Team player Information				Latvia Player information			
name	age	Height	score	name	age	Height	score
Peng Yan	25	198 cm	2	Karlis Lasmanis	27	200 cm	4
Shiyan Gao	25	185 cm	3	Edgars Kruminis	35	195 cm	11
Haonan Li	22	197 cm	0	Nauris MiezisV	30	19 cm	2
Jingiu Hu	23	210 cm	12	Agnis Cavars	34	196 cm	1

be seen in the player score, Latvia team members have points, while the Chinese team scored only three.

2) Technical statistical analysis of Chinese team and Latvia team

Table 6 shows that there is little difference between the Chinese team and the Latvian team in terms of data. The Chinese team is superior to the Latvian team in terms of defensive rebounds, assists and one-point shooting, while the Latvian team is superior to the Chinese team in terms of the number of free throws and two-point shooting. Although Latvia led by only one point, it was the latvian team that won the game in the number of free throws and the number of free throws made.

Table 6. Technical statistics of the match between Chinese and Latvia

Chinese	Technical statistics	Latvia
17	scoree	18
17	Defensive rebound	15
4	assists	3
2	blocking	2
3/67%	Block Shot	5/80%
18/61%	Free throws/ FGs	16/50%
13/15%	1 point shot attempts/ FGs	18/17%
6	2 point shot attempts/ FGs	6
7	Turnover	7
17	foul	18

3.4 Analysis of Factors of Chinese Team's Defeat Against Holland Team

1) Basic information of Chinese and Holland players

Table 7 shows that The Chinese team is younger than the Dutch team in terms of age and has certain advantages in terms of physical strength. According to the individual scores of the players, none of the Chinese team scored except Hu Jinqiu and Li Haonan, while all the Dutch team scored. Although Hu Jinqiu has a huge advantage in the inside line, due to the poor performance of the teammates, The Dutch will use too many double teams to drain Hu chinqiu's energy.

2) Technical statistical analysis of Chinese team and Holland team

Table 8 shows the Chinese team on the defensive rebounds, 1 scores goals, assists and block data is better than Japan, but China is much difference between the two ball hit count, China 2 points on only 1 ball, and hit rate 12%, and the Netherlands on the

Table 7. Basic information of players of Chinese and Holland

Chinese Team player Information				Holland Player information			
name	age	Height	score	name	age	Height	score
Peng Yan	25	198 cm	0	Dimeo van der HORST	31	197 cm	8
Shiyan Gao	25	185 cm	0	Ross BEKKERING	34	192 cm	3
Haonan Li	22	197 cm	1	Arvin SLAGTER	36	204 cm	6
Jingiu Hu	23	210 cm	17	JesseyVOORN	31	192 cm	4

Table 8. Technical statistics of the match between Chinese and Holland

Chinese	Technical statistics	Holland
18	scoree	21
13	Defensive rebound	11
10	assists	4
1	blocking	0
3/100%	Block Shot	6/67%
18/72%	Free throws/ FGs	16/56%
8/12%	1 point shot attempts/ FGs	16/25%
3	2 point shot attempts/ FGs	3
8	Turnover	8
18	foul	21

2 ball made four, through the conversion, the Netherlands in 2 min and six points will occupy the advantage in the ball. It can be seen that the key to winning the game lies in the hitting of 2 points.

3.5 Analysis of Factors of Chinese Team's Defeat Against Japan Team

1) Basic information of Chinese and Japan players

Table 9 shows that the Height of the Chinese team is significantly higher than that of the Japanese team. In terms of age, the Chinese team is generally younger, while the age distribution of the Japanese team shows a dispersion state. On the surface, The Chinese team has a great advantage in the interior, and also reflects a certain advantage in the position of the front line.

2) Technical statistical analysis of Chinese team and Japan team

Table 10 shows that China and Japan on the defensive rebounds, assists, 1 min ball number, 1 min, shooting, free throws and error data were similar, such as its main in

Table 9. Basic information of players of Chinese and Japan

Chinese Team player Information				Japan Player information			
name	age	Height	score	name	age	Height	score
Peng Yan	25	198 cm	0	Ryuto Yasuoka	26	188 cm	8
Shiyan Gao	25	185 cm	0	Keisei Tominaga	19	185 cm	4
Haonan Li	22	197 cm	1	Ira Brown	36	193 cm	1
Jingiu Hu	23	210 cm	17	Tominaga Ira	30	195 cm	0

Table 10. Technical statistics of the match between Chinese and Japan

Chinese	Technical statistics	Japan
16	scoree	21
8	Defensive rebound	7
0	assists	1
1	blocking	1
3	Block Shot	3
5/60%	Free throws/ FGs	4/60%
15/60%	1 point shot attempts/ FGs	12/67%
6/33%	2 point shot attempts/ FGs	11/45%
4	Turnover	3
8	foul	7

2 points ball hit number, two points on the shooting has significant differences, on the ball score 2 points, Japan China more than 3, and hit ratio is 12% higher. It can be seen that the key to the decisive victory between China and Japan lies in the quantity and quality of the 2 points.

4 Conclusion

The Chinese team suffered a rapid decline in fitness during the five games of strong confrontation and quick transition attack, resulting in a drop in shooting percentage and an increase in turnovers in the second half of the game. In the outside 2 point percentage and the number of shots are lower than opponents. Its offensive tactics are relatively simple, mostly using center outside screen and pick-and-roll cooperation, while other teams prefer to screen players without the ball. On defense, it is easy to appear that the other player screen or pick and roll after the change of defense is not timely.

In this 3X3 basketball match, because of the fierce confrontation, the rapid conversion between offense and defense, and the large scale of blowing and penalty, the Chinese players did not adapt to the situation. It is necessary to strengthen the confrontation and physical training of 3X3 basketball players. In 3X3 basketball game, the 2-point shot is an important variable to win, so it is necessary to strengthen the 3-point shooting training of Chinese players in the confrontation and improve the 3-point shooting ratio.

Acknowledgment. Thanks to the questionnaire surveyors and reference authors.

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