Technical and Tactical Analysis of the Back Court of the Top Eight Badminton Women's Singles Matches in Rio Olympic Games

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Abstract

As a sport integrating entertainment and fitness, Chinese badminton technology has long been in the leading position in the world, especially the position of women's singles can be said to be unshakable. However, after the London Olympics, the world pattern of women's badminton singles began to change, and the Chinese badminton women's singles scores declined all the way, and they missed the World Championship for eight consecutive times, even the medals in Rio Olympics. Fast, accurate and tough masculine style has become the trend of women's singles. By using the methods of literature review, video observation, mathematical statistics, comparative analysis and logical analysis, this paper collected the data of the top eight badminton women's singles events in Rio Olympic Games, and analyzed their backcourt skills, scores and losses. The purpose is to summarize the characteristics of women's singles and provide some basis for the improvement and development of badminton technology in China. The results show that the back court ball is mainly killing the ball, combined with the application of lob, lob and net ball, and the playing style tends to be changeable and three-dimensional. In particular, Marín Martin's continuous pressing ability is outstanding, and her scoring ability in the backcourt is super strong.

Keywords

Rio Olympic Games; Women's singles; Badminton; Backcourt technique and tacti.

1. Introduce

Chinese women's singles has set a series of records in the past ten years, winning eight consecutive world championships and eight Olympic gold medals, making China dominate the world stage and establishing the position of badminton in the world. However, after the 30th Olympic Games, China's women's singles began to decline, with the worst record in nearly 37 years. Not only did it miss the World Championship for four consecutive times, but it also missed the medal at the 31st Olympic Games. Who would have thought that the former overlord's achievements in recent years were so bleak?

There are two reasons for this situation in Chinese women's badminton: on the one hand, after the 30th Olympic Games, Chinese women's singles players are out of touch. As the old players get older, they suffer more injuries and their competitive state gradually declines, while the young players don't have enough competition experience, so their state fluctuates and their psychological quality is poor. On the other hand, badminton technology has entered the era of rapid development, and a hundred schools of thought contend. Especially in the new era, with the development of masculine style of women's singles technology, China obviously failed to make its own changes in due course.

The purpose of this paper is to further understand the advanced technical and tactical characteristics of women's singles in Rio Olympic Games, predict the development trend of women's singles, provide some reference for badminton workers and athletes, provide the

construction direction for badminton reserve talents and theoretical support for the development of badminton.

2. Research Objects and Research Methods2.1 Research Object

The techniques and tactics of the semi-finals and finals of the top eight badminton women's singles players in Rio Olympic Games are selected as the research objects.

2.1. Research Methods

Literature review, video observation, mathematical statistics, comparative analysis and logical analysis.

3. Results and Analysis

3.1. Overall Statistical Analysis of Technical Gain and Loss Rate in Backcourt

Table 1. Statistics on the percentage of women's badminton singles in the top eight of the Rio Olympic Games.

Technology	Score		Lose Points	
	Frequency	Percentage	Frequency	Percentage
High ball	5	4.2	20	18.69
Kill ball	85	71.43	47	43.93
Hang ball	22	18.49	23	21.5
Drive ball	6	5.04	13	12.15
Backhand Transition	1	0.84	4	3.74
Total	119	100	107	100

From Table 1 , it can be seen that the scores of backcourt techniques are more than the losses. Among the scoring techniques, killing the ball is the most common technique, accounting for 71%, which is far higher than other techniques. The second one is hanging ball, accounting for 18.49%, followed by drive ball, high ball and backhand transition, accounting for 5.04%, 4.2% and 0.84 respectively. The technique with the most points lost is killing the ball, accounting for 43.93%; The error rate of hanging ball ranks second with 21.5%; Followed by high ball, drive ball and backhand transition, accounting for 18.69%, 12.15% and 3.74% respectively.

It shows that the most important scoring weapon in backcourt is killing the ball, and it is also the technique with the highest scoring rate. Compared with killing the ball, the speed and lethality of golf and lob are far from enough pressure on the other side. Golf is used as a control technique, and it is easy to get out of the bottom line if the power radian is not well controlled. Hanging ball is generally combined with the use of the ball in front of the net to mobilize the running distance of the opponent and change the rhythm. It is easy to get off the net if the requirements are too high. The transition between drive ball and backhand is generally used as a transition technique, and the contribution rate of scoring is not very high, but the rate of losing points is very high, which requires us to strengthen the quality of transition ball and avoid making ourselves fall into a passive situation.

3.2. Comparative Analysis of Technical Scoring Rate in Backcourt

From Table 2, we can see the technical characteristics of each women's singles player in the backcourt. The most important scoring means of the eight women's singles players in the backcourt is killing the ball, accounting for far more than half of the backcourt scores. The largest proportion is Cheng Chixuan, and the scores in the backcourt are all from killing the ball.

Secondly, Li Xuerui and Aohara hope to account for 85.72% and 76.92% respectively. The least number of Shankouxi also accounted for 54.54%. Marín Martin scored the most on golf, accounting for 7.69%, followed by Peng Yu and Li Xuerui, accounting for 20% and 7.14% respectively, and the rest of the players didn't score. The highest score in the lob is Yamaguchi Akane, accounting for 36.36%, and the second and third are Aohara Hope and Peng Yu, accounting for 23.08% and 20.0% respectively. However, there is basically no difference between drive ball and backhand transition, with few scores.

Table 2. Comparison of technical scoring rates of the top eight badminton women's singles in Rio Olympic Games

		High	Kill	hang	Drive	Backhand Transition	Total
Marín Martin	Frequency	3	28	7	1	0	39
	Rate	7.69	71.79	17.95	2.56	0	100
Cheng Chi-hyun	Frequency	0	2	0	0	0	2
	Rate	0.00	100.00	0.00	0.00	0.00	100
Li Xuerui	Frequency	1	12	1	0	0	14
	Rate	7.14	85.72	7.14	0.00	0.00	100
Pengzhai	Frequency	1	3	1	0	0	5
	Rate	20.00	60.00	20.00	0.00	0.00	100
Nozomi Okuhara	Frequency	0	10	3	0	0	13
	Rate	0.00	76.92	23.08	0.00	0.00	100
Akane Yamaguchi	Frequency	0	6	4	1	0	11
	Rate	0.00	54.54	36.36	9.09	0.00	100
Xinhude	Frequency	0	20	5	3	1	29
	Rate	0.00	68.97	17.24	5.09	3.45	100
Wang Yihan	Frequency	0	4	1	1	0	6
	Rate	0.00	66.66	16.67	16.67	0.00	100

It shows that Cheng Chi-hyun has the least scoring means in the backcourt, so he needs to strengthen his own application of lob and lob. Killing the ball in the backcourt is also her main scoring technique, so we should pay attention to the flexible application of the technique and the combination of multiple directions. Only by strengthening the scoring contribution of other techniques and enriching offensive means can the opponent be forced to make mistakes in the difficult defensive process, which is conducive to his own competition for the initiative on the field.

3.3. Comparative Analysis of Losing Points Rate of Backcourt Technology

From the table 3, we can see the technical difference of losing points in the backcourt between each women's singles player, and it can also reflect the characteristics of backcourt technology. The highest percentage of high scoring points is that Marín Martin accounts for 42.31%; The second and third places are Yamaguchi Akane and Wang Yihan, accounting for 18.18% and 16.67% respectively. Wang Yihan scored the most goals, accounting for 66.66%, followed by Sindhu and Cheng Chixuan, accounting for 52.63% and 50.0% respectively. Peng Zhai scored the most points in the hanging ball, accounting for 50.0%, followed by Aohara Hope and Yamaguchi Akane, accounting for 37.50% and 36.36% respectively. Sindhu and Cheng Chi-hyun are the players who draw the ball the most, accounting for 26.32% and 25.0% respectively. There are few points lost in backhand transition, and the difference is not great.

Table 3. Comparison of losing points rate of women's badminton singles in the top eight of Rio Olympic Games

		High	Kill	hang	Drive	Backhand Transition	Total
Marín Martin	frequency	11	12	3	0	0	26
	rate	42.31	46.15	11.54	0.00	0.00	100
Cheng Chi-hyun	Frequency	0	2	1	1	0	4
	Rate	0.00	50.00	25.00	25.00	0.00	100
Li Xuerui	Frequency	1	8	5	2	1	17
	Rate	5.88	47.06	29.41	11.77	5.88	100
Pengzhai	Frequency	1	1	4	1	1	8
	Rate	12.50	12.50	50.00	12.50	12.50	100
Nozomi Okuhara	Frequency	2	7	6	1	0	16
	Rate	12.50	43.75	37.50	6.25	0.00	100
Akane Yamaguchi	Frequency	2	3	4	2	0	11
	Rate	18.18	27.27	36.36	18.18	0.00	100
PUSARLA V. Sindhu	Frequency	2	10	0	5	2	19
	Rate	10.53	52.63	0.00	26.32	10.53	100
Wang Yihan	Frequency	1	4	0	1	0	6
	Rate	16.67	66.66	0.00	16.67	0.00	100

The data shows that Marín Martin makes the most active mistakes in golf, so it is necessary to improve the stability of golf in the competition, so she should strengthen her practice at ordinary times. Besides, in the competition, Marín Martin is easily anxious, so she should be patient at the stalemate stage. The technique of killing the ball in the backcourt is the most widely used, and the mistakes in the backcourt are all concentrated on killing the ball. Wang Yihan, Sindhu and Cheng Chixuan should strengthen the accuracy of active attack and make fewer unforced mistakes in killing the ball. Players who lose more points in the lob should also improve the stability of the lob accordingly. By watching the video materials, players often use the flat high ball to suppress the opponent's backcourt, and then combine the hanging ball to mobilize the opponent back and forth to create an opportunity to attack and kill the ball for themselves.

4. Conclusions and Suggestions

4.1. Conclusion

Backcourt technology pays attention to attacking downward pressure, and the attacking methods are changeable. In the backcourt area, killing the ball is the main technique, and killing the ball has become the most important scoring method of women's singles, and the proportion of high-distance ball has decreased compared with before. After-court killing ball and hanging ball combined with the use of net-front ball make the direction of back-court ball develop in a changeable and three-dimensional direction. The style of play tends to be changeable and three-dimensional. The players who kill the ball the most are Wang Yihan, Marín Martin and Cheng Chixuan. In particular, Marín Martin's continuous pressing ability is outstanding, and her scoring ability in the backcourt is super strong.

4.2. Suggestions

The back court actively presses down to improve the rhythm control ability. In the backcourt, every ball must be fought, and quick change is actively achieved to win. In the process of contact, we should focus on practice of killing the ball and move closer to the masculine style of play. Increase your ability to press down continuously, and practice your ability to quickly kill the

ball and block the net. Combine the hanging ball, combine the soft and hard, grasp the rhythm, enrich the style of play, improve your own speed and the strength of killing the ball, and increase the difficulty of the opponent's defense. Try to reduce active mistakes and ensure the balanced development of attack and defense.

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