

Application analysis of the offensive and coordination of the top 4 team in FIBA female 3x3 world cup 2019

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Abstract: With the continuous spread of 3x3 basketball, there are great development of 3x3 basketball. There are few researches on the offensive cooperation of 3x3 basketball. In this paper, we watched the video of the 2019 3x3 World Cup female basketball final four matches. The tactical cooperation characteristics in the match are analyzed, and the general rules of the 3x3 basketball match are found out. In order to provide the basis for the establishment of the 3x3 basketball training plan, enrich the theory of 3x3 basketball, and provide theoretical support for the tactical training of 3x3 basketball in China in the future. We draw the following conclusion: Pick and roll is the main way for offensive. Wing pick and roll is most commonly used in all screen situation. There are more difference in the line-up of the top 4 teams than total number of coordination. It is the main choice that players layup after break in this team. .

Keywords: 3x3; the offensive and coordination; FIBA

1. Introduction

With the development of 3x3 basketball, it is increase exponentially that the popular degree of 3x3 basketball. 3x3 basketball became an Olympic sport in 2017^[1]. Compared with 5x5 basketball, it is a new sport. It was derived from 5x5 basketball that 3x3 basketball was different from 5x5 basketball in rules and court. We could not entirely apply many research results in 5x5 basketball to analysis 3x3 basketball^[2,4]. Athletes were willing to use individual skills or basis coordination due to 3x3 basketball have high intensity and fast rhythm^[3,5]. Some foreign researcher could provide more information and data about coordination and performance of athletes basing on data which combined video and time-sports analysis^[3-4]. Many Chinese researchers discussed application of offence play by analyzing variable 3x3 basketball matches, and they pointed that the amount of using basic offence play was the largest especially in screen^[6-10]. The previous study focused on the analysis of the data come from video analysis, and they paid little attention to adult team. There are less discussion that combined typical tactics with data. We will analyze the characteristics of tactical cooperation in competition and find out the universal law of 3x3 basketball match by watch the video of the top 4 team in FIBA female 3x3 world cup 2019. The purpose of this paper is to provide the basis for drawing up training program of 3x3 basketball, and enrich the theory of 3x3 basketball. We also want to provide the theoretical support for Chinese tactical training of 3x3 basketball.

2. Research object and method

2.1. Research object

This paper focuses on the offensive tactics of the female team (Australia, France, Hungary, China) in the 2019 FIBA 3 x 3 Basketball World Cup.

2.2. Research method

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2.2.1. Literature review

Adopting documentation, we searched information of 3 x 3 Basketball by network of library of Beijing Sports University. We also used keywords search including: 3x3basketball, Fundamental tactics, Performance profile, and Game-related statistics etc by which is CNKI China, FIBA and other database in order to provide the theoretical support for this article.

2.2.2. Video observation

We recorded the basic offensive coordination and offensive means of 4 teams by watch the video of the top 4 team in FIBA female 3x3 world cup 2019, and summarize the main offensive methods used by the strong 3x3 female basketball team in the world at present, and make a comparative analysis of it.

2.2.3. Logical analysis

In this study, the logic method is used to analyze the relevant data collected and sorted out, summarizes the characteristics of offensive techniques and tactics of the top 4 team in FIBA female 3x3 world cup 2019. Thus, the conclusions and suggestions of the study can be obtained.

2.2.4. Mathematical statistics

The relevant data obtained after watching the video of the game are analyzed and processed, and the relevant tables are drawn up by using excel software.

3. Research results

3.1. The basic offensive means of the Top4

3x3 basketball is also called three-person basketball, coming from street hoop. It is different from 5x5 basketball in court, time, rules etc. The court of traditional 5x5 basketball is a full court of 28 meters long and 15 meters wide, however, the court of 3x3 basketball is a half court of 11 meters long and 15 meters wide. First, both teams use the same basket in 3x3 basketball due to the restriction of area. Second, compared with 5x5 basketball, it has shorter total game time and offence time. Therefore, it requires faster attack and defense in 3x3 basketball. Most teams choose basis offence play including: pick and roll, pivot play, drive and pass.

In table 1, it shows the number of application of basis offence play of the top 4 team in FIBA female 3x3 world cup 2019, specially pick and roll>drive and pass>pivot play (This study is not considered due to the number of cut is rare). First, the top two teams are France and Hungary in application of pick and roll, and pick and roll was used 5.6 and 5.5 times respectively in every game. It accounted for 59% of the tactical use of the French team, and 66% for Hungarian team. Second, France is the team that made the most use of the drive and pass among the four teams, and the drive and pass was used 2.88 times in every game. It accounted for 30% of the tactical use of the French team. France and China used the pivot play more than the remaining teams. Among them, the pivot play was used 8 times by France, and 5 times by China, when they against Hungary and Australia. The French is the team that made the most use of basis offence play among the four teams and Australia is the least.

Table 1: Application of basis offence play of the top 4 teams in FIBA female 3x3 world cup 2019

| | Pick and roll | | | Pivot play | | | Drive and pass | | | Total |
|-----------|----------------|----------------|----------------------|----------------|----------------|----------------------|----------------|---------------|----------------------|----------------|
| | Times in total | Percentage (%) | Times in every match | Times in total | Percentage (%) | Times in every match | Times in total | Percentage(%) | Times in every match | Times in total |
| Australia | 32 | 58 | 4 | 3 | 5 | 0.38 | 20 | 36 | 2.5 | 56 |
| France | 45 | 59 | 5.6 | 8 | 11 | 1 | 23 | 30 | 2.88 | 76 |
| Hungary | 44 | 66 | 5.5 | 3 | 4 | 0.38 | 20 | 30 | 2.5 | 67 |
| China | 43 | 63 | 5.4 | 5 | 7 | 0.63 | 20 | 29 | 2.5 | 68 |

3.2. The Pick and roll application of the Top4

3.2.1. Fundamental information

The pick and roll, also known as the screen and roll, is one of the simplest plays to execute offensively. While it may be simple to run, if executed properly, it can be a nightmare for defenses to defend. An offensive player sets a screen for another offensive player who currently has the ball. This is also known as a ball screen (The Pick). The offensive player dribbles around the ball screen and looks to score. The

screeener, opens up to the ball, and cuts to the basket (The Roll).While the pick and roll can be executed almost anywhere on the floor. There are 3 types of the pick and roll.Wing Pick and Roll - Top Side:The ball screen is set near the wing area and the screener's back will face the middle of the floor.Wing Pick and Roll - Baseline Side:The ball screen is set near the wing area and the screener's back will face the baseline.High Pick and Roll:This ball screen is set near the top of the key.Flat Pick and Roll:This pick and roll is executed with the screener's back facing the basket. A-Set Pick and Roll:The pick and roll can also be executed out of the a-set. It also was divided into Wing Pick and Roll, Back Pick and Roll and Front Pick and Roll[11]. The Pick and Roll was used in Top and side.

It illustrates the number of the pick and roll application of the top 4 team in FIBA female 3x3 world cup 2019 in table 2. The Hungarian team used the most of the pick and roll with ball,and the number of Hungary is 30 , however, the Chinese team used it only 20 times. Besides,the Chinese team used the most of the pick and roll with no ball is 23 times, and the Australian team used it only 5 times when they against china and France.

The Wing Pick and Roll was used the most times in the 4 teams in the three pick and roll types.The Hungarian team used the most of the back pick and roll ,and the number of Hungary is 8, however, the Australian team used it only 1 times. The French team used the most of the front pick and roll.

There is no significant difference in the choice of the top pick and roll between China, Australia and France. The Hungary is different from others, and the number of the top pick and roll was used by Hungary was 12,and its the least , however, the side pick and roll was 30.The Australian team used the least of the side pick and roll ,and the number of Australia is 14.

According to the data, the Australian team, the French team, and the Hungarian team are more likely to use the pick and roll with ball.The Chinese team is more balanced in the use of the pick and roll with ball and the pick and roll with no ball. The 4 teams are more likely to use the side pick and roll , but the front pick and roll and the back pick and roll are used less frequently. There are no significant difference in the choice of the top pick and roll between China, Australia and France in the selection of the pick and roll area. The Hungarian team used the least of the top pick and roll, but they used the most of the side pick and roll. However, the Australian team used the least of the side pick and roll.

Table 2: Application of Pick and Roll of the top 4 teams in FIBA female 3x3 world cup 2019

| | Ball/no ball | | Types | | | area | |
|-----------|--------------|---------|-------|------|-------|------|------|
| | Ball | No ball | Wing | Back | Front | Top | Side |
| Australia | 27 | 5 | 29 | 1 | 2 | 18 | 14 |
| France | 28 | 17 | 34 | 6 | 5 | 17 | 26 |
| Hungary | 30 | 14 | 33 | 8 | 2 | 12 | 30 |
| China | 20 | 23 | 35 | 7 | 2 | 19 | 24 |

3.2.2. Application of offence after Pick and Roll

According to Table 3, Australia chose the most offensive method of layup after pick and roll, and it was used by Australia 11 times. China is a team with the least offensive means,it was used by China 3 times. Hungarian chose the most offensive method of shoot after pick and roll, and it was used by Hungary 15 times. Australia is a team with the least offensive means,it was used by Australia 6 times. French chose the most offensive method of pass after pick and roll, and it was used by France 14 times. Hungary is a team with the least offensive means,it was used by Hungary 6 times.French had turnover 4 times after pick and roll, and it was the most. However, China had turnover only 1 times after pick and roll,and it was the least.

Overall, Australia chose the most offensive method of layup after pick and roll,and Hungarian chose the most offensive method of shoot after pick and roll. However, French chose the most offensive method of pass after pick and roll. China had turnover only 1 times.

Table 3: Application of offence after Pick and Roll of the top 4 teams in FIBA female 3x3 world cup 2019

| | layup | shoot | pass | turnover |
|-----------|-------|-------|------|----------|
| Australia | 11 | 3 | 12 | 3 |
| France | 9 | 7 | 14 | 4 |
| Hungary | 10 | 15 | 6 | 3 |
| China | 3 | 12 | 11 | 1 |

3.3. The Pivot play application of the Top4

Centers can help their team a lot by learning how to pass. A center that can find the open player when double teamed can help their team score. The pivot play often used by centers to link their team[11]. The Pivot play was used in low and high. In table 4, it shows the number of pivot play application of the top 4 team in FIBA female 3x3 world cup 2019, specially high>low, when they choose the area to pivot play.

The French team used the most of the pivot play, and the number of France is 8 times, however, the Australian team used it only 3 times when they against Chinese team and French team, and it was the least. After the pivot play was used, It was used the most that Hungary chose to pass to inside, on the contrary, it was used the least that Hungary chose to pass to outside. Compared with used the pivot play in low, four teams were likely used the pivot play in high the most.

Table 4: Application of pivot of the top 4 teams in FIBA female 3x3 world cup 2019

| | area | | Pass type | |
|-----------|------|-----|-----------|---------|
| | high | low | inside | outside |
| Australia | 3 | 0 | 0 | 1 |
| France | 8 | 0 | 1 | 5 |
| Hungary | 3 | 0 | 3 | 0 |
| China | 4 | 1 | 0 | 1 |

3.4. Application of offence after Drive and Pass

"Drive" means to get the ball from outside the 3 Point line to the basket for a lay up. Most of the time it is done by dribble penetration by the attacking team. A drive and dish is not a car and a plate, a drive and dish in Basketball is when an offensive player dribbles the ball towards the rim and becomes double teamed. In which case he passes the Basketball out to the tree point line for the open shot.

According to Table 5, Australia chose the most offensive method of layup after pivot play, and it was used by Australia 16 times. Hungary is a team with the least offensive means, it was used by Hungary 12 times. China chose the most offensive method of shoot after pivot play, and it was used by China 5 times when they against Australian team and Hungarian team. However, Australian team did chose shoot or pass after their athletes drive. The French team used the most of pass after pivot play, and the number of France is 5 times when they against Australian team and Hungarian team. After the drive and pass, the four teams have fewer options to drive the attack again. China is the only team in the four teams to use the drive and pass with zero turnover.

As a results, the four teams chose the most offensive method of layup after pivot play, and the least is drive again. China chose the most offensive method of shoot after pivot play, and it is the only team in the four teams to use the drive and pass with zero turnover. The French team used the most of pass after pivot play.

Table 5: Application of offence after Drive and Pass of the top 4 teams in FIBA female 3x3 world cup 2019

| | layup | shoot | pass | drive | turnover |
|-----------|-------|-------|------|-------|----------|
| Australia | 16 | 0 | 0 | 1 | 3 |
| France | 13 | 2 | 5 | 0 | 3 |
| Hungary | 12 | 3 | 3 | 0 | 2 |
| China | 14 | 5 | 0 | 1 | 0 |

3.5. The main tactics of the Top4

It is the main tactics of the Top4 in FIBA female 3x3 world cup 2019.

Falling in the form of high-order 1-2, the shooters use others in other side to have the pick and roll, becoming an Iverson cut position.(Graph 1)

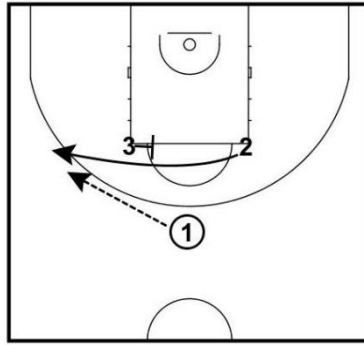


Figure 1: Diagrammatic sketch of tactics 1

The player No.1 pass the ball to one side and cut, another player with no ball find chance to have the ball at the same time. It could form a drive to achieve offence.

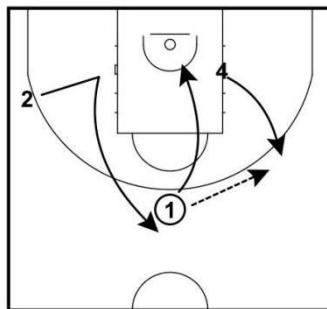


Figure 2: Diagrammatic sketch 1 of tactics 2

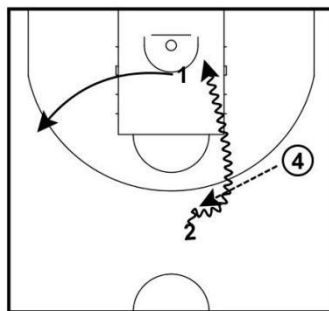


Figure 3: Diagrammatic sketch 2 of tactics2

Falling in the form of a low of 1-2.The player No.1 go outside to have the ball,and the others form the pick and roll.The player No.1 could used the screener's body to drive and layup.

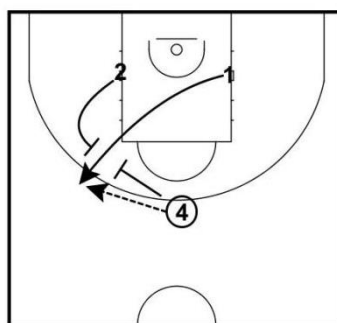


Figure 4: diagrammatic sketch of tactics3

Therefore, the four teams chose the most was that the player with no ball used the pick and roll to create the first chance to offence, and then, they were likely to use the pick and roll and drive to achieve

offence.

4. Discussion

Analyzing competition of the top four team, we could find out the different from 3x3 basketball between 5x5 basketball. Whether it's a male group or a female group, the pick and roll was used the most in 3x3 basketball. It is different from 5x5 basketball that they are likely to use drive and pass in their competition [4,12]. There are more rotary transposition in defence of 5x5 basketball, and it could create more chance to pass. However, fewer players and large space require the level of defence higher, there are less rotary transposition in defence of 3x3 basketball. There are also relatively few opportunities to score the ball after using the time difference to produce a drive. Maybe it is the reason why they chose the different tactics to offence. Obviously, there are fewer tactical types of 3 x 3 basketball than 5x5 basketball.

Some researchers pointed that the small cooperation between two and three is the foundation of the attack and defense tactics of 3x3 basketball[13]. We find out that individual offence were more aggressive, especially the China and Hungary. Under aggressive defense, it becomes more and more difficult for athletes to have the ball and attack directly through their personal ability. In a 3x3 basketball with a larger per-capita area, the use of the pick and roll will force defensive players to make defensive moves that squeeze, bypass, and even pass through, and even cause defensive rotation. France have a bigman as a centre, but she are weak at individual offence. Outside height of France does not have an advantage, but the advantage of a fast personal drive, the pick and roll were used many times, and the French team used the most of the pick and roll in the top 4. The Australian team used the least of the pick and roll in the top 4. As far as the whole team is concerned, The physical conditions and individual abilities of the Australian team players are relatively ordinary, but the overall coordination especially in the pick and roll is less and the offence play is simple. As the defensive strength increases, the individual physical strength decreases, and the offensive success rate will decrease. Therefore, the Australian team lose the match with huge score gap when they against the French team. The relationship between the number of matches used in a 3x3 match and the success rate and the outcome of the match can be explored in the next study.

There is almost no conventionally recognized method for 3x3 basketball standing. The placement of each team breaks the conventional position boundary, and the individual's offense is not constrained by the conventional form[13]. These are very obvious in the competition of the top four teams. Regardless of the "one inside, two outside" or "one outside, two inside" lineup, the top four teams have a fuzzy position. The inside player of the Chinese team has the traditional center figure of a 5x5 basketball game, but there are flexible footsteps and delicate techniques of the outside players in the game, making the team more options on the offence. The French team also has tall players, the same as Chinese team, using the tall players to open up the space and makes the French team's personal offense in outside more easier and more successful tactical cooperation. Therefore, we find out that players are required to have more comprehensive technology, and there will be more forms and choices of basic cooperation in a 3x3 basketball match. The impact of vague player positions on 3x3 matches is worth analyzing in subsequent studies.

5. Conclusions

Pick and roll is the main way for offensive. Wing pick and roll is most commonly used in all screen situation.

There are more difference in the line-up of the top 4 teams than total number of offence play.

It is the main choice that players layup after drive in this team.

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Thanks for my honey. She helped me all the time and let me overcome some difficulties.

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