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Development of a 3X3 Basketball Training Program Based on the Game Analysis

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Abstract

Background and Aim: The classic game of five-a-side basketball, which was first introduced as an official competition at the 32nd Olympic Games, gave rise to the new sport of 3x3 basketball. At the 32nd Olympic Games, China's women's 3x3 basketball team made history by winning the bronze medal and demonstrating exceptional competitiveness. The world's top teams still differ from one another, though. In addition, 3x3 basketball will become more well-known and appreciated in China. As much as we should celebrate the outcome, we also need to get ready for the Chinese team's next matchup against the best teams in the world. This article's primary research objective is to develop a three-woman basketball training regimen based on the analysis's findings. The research objectives are: 1) To study the results of the analysis of techniques, tactics, and quality of three women's basketball teams. of China in the 32nd Olympic Games. 2) To create a basketball training design based on the analysis results.3) To find the effectiveness of a 3-players basketball training plan created from the results of the game analysis

Materials and Methods: This study adopts literature research, investigation, data analysis, logic analysis, and experiment methods. The sample included Chinese basketball players and 32 athletes from seven countries, including Romania, Russia, Italy, Japan, the United States, Mongolia, and France. In the experiment, 15 women's basketball athletes from Zhaoqing College were randomly selected for targeted training, and comprehensive tests were carried out before and after training to evaluate the effectiveness of the training plan.

Result: The research results found that 1) Obtain a 3-person basketball training exercise from the game analysis results. 2) Obtain an effective 3-person basketball practice according to the set criteria of 80/80 with an efficiency of 85.75/95.75. It shows that this training plan is very effective for improving the performance of athletes.

Conclusion: The 3X3 basketball training method based on the analysis of the game data is very effective for improving the level and performance of the athletes.

Keywords: 3x3 Basketball; Game Analysis; Training Plan

Introduction

Three-player basketball is a three-on-three confrontation sport in the half-court. It is a new sports item developed based on five-a-side basketball. Three-player basketball originated from street basketball, after years of evolution has developed into an official competition event that is different from street basketball, is an important part of the modern basketball discipline, and is now the official Olympic Games One of the events. In 2011, the International Basketball Federation (FIBA) officially established "three-player basketball" as an official competition. In June 2017, the International Olympic Committee (IOC) recognized three-player basketball as an official Olympic sport. With the continuous improvement of the rules and the continuous improvement of the level of athletes, its standardization is getting higher and higher. Three-player basketball has a strong appreciation, fun, antagonistic, collective, easy to organize, and extensive participation characteristics, especially by the majority of young people like, at present, China has more than 30 million people participating in this sport.

At the 32nd Olympic Games in Japan, the Chinese team represented the highest level of three-player basketball in China. The participating teams also represent the highest level of three-player basketball in the world. But the performance of the Chinese team also shows that there is a certain gap between the strength of China's Three players in basketball and the world's strong teams. Problems Solved in the past. and weaknesses of the solution from the literature review, it was found that most current basketball studies focus on futsal basketball, and there are only a few three-player basketball studies and three-player basketball studies. Mainly about their state of development and peculiarities. And studies on three-player offensive strategies in three-player basketball are scarce.

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The Chinese women's basketball team's participation in the Tokyo Olympics is currently the highest level of the Chinese women's basketball team. By accurately observing the technical gap between Chinese women's basketball players and other strong teams in the world, we can find out the rules and characteristics of 3x3 basketball. Through the comparative study of the offensive skills and tactics of the Chinese women's 3x3 basketball team in the 32nd Tokyo Olympics and the analysis and summary of the offensive data of the game, the application characteristics of the offensive skills and tactics of the Chinese women's basketball team and the participating teams in the Olympic 3x3 basketball competition were summarized, and their advantages and disadvantages were discovered, and the training plan was formulated. It provides an effective theoretical system for the training of offensive technical and tactical levels in future 3x3 basketball games. And to develop a training plan to further improve the ability of Chinese players, can make Chinese 3x3 basketball make greater breakthroughs in future training and competitions.

Objectives

The purpose of this research is to find out as follows:

1. To study the results of the analysis of techniques, tactics, and quality of three women's basketball teams of China in the 32nd Olympic Games.
2. To compare the effectiveness of a 3-player basketball training plan created from the results of the game and test analysis
3. To develop a 3X3 basketball training program based on the game analysis and check whether the training plan is effective.

Literature Review

Bin (2016) pointed out in the "Construction of China's three-players Basketball Competition System" that with the rapid development of three-player basketball in China, some problems have gradually been exposed, among which the lack of management and planning of special departments, the competition system and rules are not unified, and the lack of scientific talent training system is more prominent. To accelerate the construction of the three-player basketball system, it is beneficial to integrate China's three-player basketball system with the international three-player basketball competition system and promote the cultivation of high-level basketball competitive talents.

Ying Hai (2017) pointed out in "A Study on the Use of Offensive Tactics in the 1st World University Three-on-Three Men's Basketball Game". The offensive tactics of 3x3 basketball are different from those of 5x3 basketball, and the offensive tactics of 3x3 basketball are mainly based on tactics including covering, responding, sudden, passing, and cutting. Among them, there are also many times of cover and use, The number of transfers and cuts is minimal. 3x3 basketball is determined by the rules of space as well as the limitations of the players' The pace of the game is tight, and the transition between attack and defense is fast.

In the "Research on the Technical and Tactical Characteristics of the World University Men's 3x3 Basketball Competition", Chuanxia Shi (2018) took the top eight teams in the 2017 World University 3x3 Basketball Competition as the research object and made a detailed analysis of the characteristics of the technical and tactical application of this competition from the aspects of average points per game, offensive mode selection, average offensive tactics per game and success rate. It is pointed out that the scoring ratio of each team is dominated by two-point shots, the offensive selection is more inclined to individual offense, the basic offensive tactics are dominated by cover tactics, and the defensive mode is dominated by man-marking.

In his article "Study on the Characteristics of 3x3 Basketball Competition", Bing Zhou (2014) proposed that the Chinese team mainly uses man-to-man attack and defense in international competitions, and the cooperation between the three players on the court needs to be improved. At the same time, there is a big gap between the Chinese team and the international strong teams in the scoring of one-point and two-point shots, and the shooting rate is not high. In the overall application of offensive tactics, the proportion of the use of pass and cut tactics, the use of tactical conditions, the use of sudden points tactics and the use of screen tactics is lower than that of the international strong teams, which is also an important reason for the current three-players basketball offensive tactics of

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the Chinese team to be lower than the international level. It is necessary to strengthen the technical training of the Chinese team players in the application of offensive tactics. Compared with five-player basketball,3x3 basketball is less than five-player basketball in terms of technical means, both players and venues, which makes the fundamental difference in the game system between the two. The basic skills of three-player basketball generally include movement, dribbling, pass and catch, shooting, and other related skills. Because only three players are participating in the game, the players on the court do not have completely clear offensive and defensive positions, and the players present more comprehensive skills on the offensive and defensive ends.

In the study "On the Offensive and Defensive Characteristics of Women's Top Four Teams in the 2018 three-players Basketball World Cup", Miao Li (2019) concluded that the percentage of point shots in three-player basketball games is the highest. Rebounding and receiving movements account for the largest proportion of offensive movements. 3x3 basketball is mainly based on basic cooperation as the attack mode, and individuals holding the ball singles also occupy a large proportion. The best offensive pass and cut tactics require high timing and passing ability, use less, and use the most frequent screen coordination, but are also very efficient.

In the Analysis of Men's Basketball Offensive and Defensive Techniques and Tactics in the Three-players Basketball World Cup, Guolin Zhang (2020) proposed that in the three-player basketball game, due to the special scoring rules, players often choose to shoot in the movement, so in the training process, players should strengthen the practice of various shooting techniques. In addition, three-player basketball players should not only have good physical quality and comprehensive skills but also need to have a good understanding with their teammates on both sides of the attack and defense, so that they can largely make up for their gap. By watching the three-player World Cup men's basketball game, it is concluded that there is a certain gap between the Chinese team and the world's strong teams in the application of offensive techniques. Although the Chinese team players mainly use cross-step breakthrough, due to the lack of experience of young players, the use of offensive tactics is mainly to screen cooperation, and the attack scoring rate is not high. Recommended players in the daily training process, attention should be paid to improve the tacit understanding between the player's cooperate degree,

Guo Huang (2019) wrote "2016 World three-players Basketball Championship Four Team Offensive Tactics Use Research", to five kinds of attacks By analyzing the form of landing, the offensive tactics are divided into a screen with the ball, screen without the ball, pass and cut cooperation, break through the ball with the ball and coordination, statistics of the shooting rate, the success rate of the attack and the number of mistakes, more directly explore the importance of the application of tactics in the game. that in a high-level 3x3 basketball game, if the match is evenly matched, only using the single basic offensive strategy of screen cooperation or passing and cutting cooperation cannot achieve the winning effect. Instead, we should attack through a continuous no-ball screen or a combination of screen and pass and cut in position attack, to improve the effective attack efficiency.

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Conceptual Framework

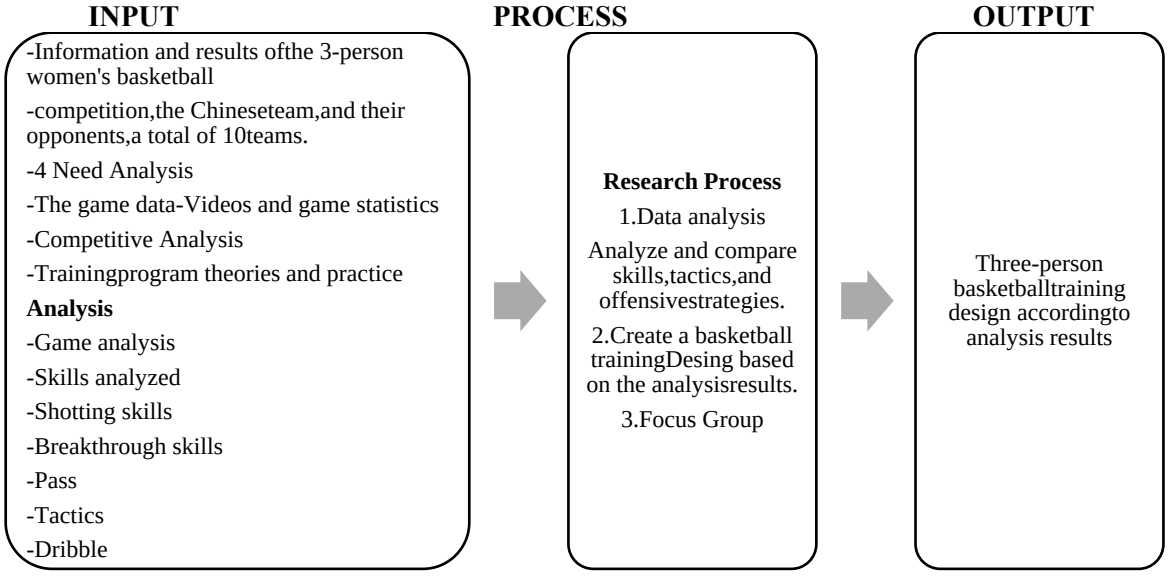

Figure 1 Conceptual Framework

Methodology

Population and Sample

1. In this research the researcher used the entire sample. The comparative analysis consisted of samples of Chinese basketball players and 7 countries: Romania, Russia, Italy, Japan, the United States, Mongolia, and France, totaling 32 samples.

2. The sample group used in the experiment to determine the effectiveness of the training was 15 people, a sample group of basketball players from Zhaoqing College by specific random sampling

Research instrument

1. Tencent Video and CCTV of the Chinese national team Competing in the 32nd Olympics,10 matches

2. Excel analysis form created by the researcher.

3. 3x3 basketball training plan created by the researcher.

Data collection

Use Excel to collect and organize the data obtained.

1. Manually record the data by watching the game, confirm the data by repeatedly watching the game video, and count According to https://www.fiba.basketball/olympics/3x3/2020/game data of the Tokyo Olympic Games official website Compare, strive for the data to be true and effective. The data includes points, shooting percentage, assists, rebounds, turnovers, and other data as well as the tactical choices of these teams in the game, including offensive tactics, defensive tactics, fast breaks and other strategies, the ability to get the ball, the ability to dominate the ball, and the offensive ability of individuals. The network collects the age, height, weight, and Ketolet index of players.

2. Collect the data obtained from the analysis results to create a basketball training

3. Test the exercises with a sample of 15 people to find out the effectiveness of the exercises.

Data Analysis

Including scoring, shooting percentage, assists, rebounds, turnovers, and other data as well as the tactical choices of these teams in the game, including offensive tactics, defensive tactics, fast break and other strategies, the ability to get the ball, the ability to dominate the ball, individual ability and other aspects of offensive ability also includes all players age, height, weight, Ketolet index.

The above data was inserted into Excel and classified to make a table for comparative analysis.

Research Process

Step 1 Review literature and research

1) According to the needs of the paper, make full use of online literature resources, through the well-known database retrieval and learning "basketball offensive tactics", "three basketball

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offensive tactics", and "three basketball offensive ability", for the keyword related literature, refer to 3x3 basketball related journal literature, China and foreign excellent dissertation several, consult, borrow and 3x3 basketball related books, for the paper literature and research analysis, provide theoretical basis and reference materials.

2) Collect data from related studies to guide this study.

Step 2 Gathering ideas and consulting data to formulate a conceptual frame.

1) Clearly defined research questions or research questions

2) Seek advice from experts, mentors, or colleagues in the field. Experts can provide advice and insights on the construction of conceptual frameworks.

3) Based on the literature review, expert opinions, and research questions, a conceptual framework is attempted.

Step 3 Defining the Conceptual Framework

1) How to analyze video

2) Mathematical statistical methods

3) Method of logical analysis

4) Making Excel Statistical Analysis Form

Step 4 Collecting data

1) Input data into Excel to create charts.

2) Create a three-player basketball training design based on the analysis.

3) Results.

4) The experiment was carried out by using the training exercises created by the researcher with a sample of 15 people.

5) Find efficiency in the 80/80 exercise.

Step 5 Summarize research findings and write a summary of research findings.

Statistics used in data analysis

$$E_1 = \frac{\frac{\Sigma X}{N}}{A} \times 100$$

$$E_2 = \frac{\frac{\Sigma Y}{N}}{B} \times 100$$

Determining the effectiveness of exercises

Calculation of efficiency using the following calculation method.

E1 is obtained by adding together the scores of every piece of work of each student and averaging the results as a percentage.

E2 is obtained by combining the scores of the post-experiment examination results of all students. Then find the average and compare it to the percentage.

Results

The basic situation of the Chinese team and 7 opponents

Based on a list of national athletes and calculate the average： The average age of the eight teams participating in the competition is between 23 and 33 years old, and the average age of the Chinese team is 23 years old. In terms of age, it is found that the Chinese team is significantly different from the Italian team and the Romanian team, and the Japanese team, the Russian team, and the United States team are teams with an average age close to our country. The Chinese team has an absolute advantage in the physical strength of the interior players, but in the matches against the European, African, and American national teams, the physical strength of the defenders is slightly insufficient. In basketball, the advantage of height and weight can improve the confrontation in the game. Unlike men's basketball players, female basketball players have relatively poor explosive qualities, so they rely more on height and weight to increase their defensive range. Height remains one of the most

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important criteria for choosing a basketball player in the world. In the women's basketball competition of the 32nd Tokyo Olympic Games, the Chinese women's basketball team ranked first with an average height of 185.75 and an average weight of 79.76.

Analysis of the 10 matches of the Chinese team

The statistical data and outcome relationship of each match are listed and analyzed by logical analysis method.

The statistics are

1. One-point shot
2. Two-point shot
3. Penalty shot
4. Breakthrough style
5. Comparison of breakthrough effect
6. Passing effect
7. Tactical effect of cover
8. Tactical response effect
9. Breakthrough pass effect comparison
10. Comparison of cutting effect after passing
11. The way of dribbling

1. In the game, a strong breakthrough ability is very important and is an important means to directly cut to the basket to score. Holding the ball can also disrupt the opponent's defense deployment and create more and better shooting opportunities for his partners. If the breakthrough can be skillfully combined with shooting, passing, and so on, so that the breakthrough technology is flexible and changeable, it can better play the breakthrough technology's attack force. Is one of the most likely winning factors in the game.

2. Dribbling is an important technique for individual attack in basketball games. It is not only a powerful means of individual attack but also a bridge to organize the tactical cooperation of the whole team. Can break through defenses, launch attacks, adjust positions, and find the right time to pass and shoot. Was one of the biggest winning factors in the game.

3. shooting is the most direct and effective means of scoring. The purpose of the offensive team using various techniques and tactics is to create more and better shooting opportunities and strive to score, so improving the shooting percentage is essential. Which is one of the biggest winning factors of the game.

4. one-on-one singles can play a very large role in 3x3 basketball because the space is large, one-on-one singles can play a considerable role after success. Is one of the biggest winning factors in the game.

5. Tactics is the rational use of individual skills and the organizational form of cooperation between players in basketball games. Basketball tactics is the method of cooperative action between the players in the basketball game. Its purpose is to give better play to the skills and strengths of the players, restrict the other side, and strive to master the initiative of the game. Reasonable use of tactics can better play the advantage of the players.

6. Passing is an essential skill, especially for the team responsible for the organization of the players, can series the team, activate the offensive attributes, and is one of the winning factors in the game.

7. the importance of physical fitness cannot be ignored. Strength, speed, endurance, and flexibility are the four most critical points, that directly affect the performance in the game, in the training plan should focus on the arrangement of physical fitness exercises.

Training plan

Based on the analysis of the basic situation of the Chinese team against 7 opponents and the analysis of 10 games, a 3-a-side basketball training plan was created

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Table1 Training plan

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning	Skill Training course (intensive,90 minutes)	Light skill training (less intense,50 minutes)	Skill Training course (intensive,90 minutes)	Light skill training (less intense,50 minutes)	Flex day (Depending on your physical condition, it can be more or less intense)		Rest
Afternoon	Strength training (high intensity) under the body training, fast movement	Strength training (light) Upper body training movement training	Strength training (high intensity) lower body training, large weight, few times, short time	Strength training (light) Upper body training, mobility training	Strength training (high intensity) Lower extremity training, multiple reps	Game day	Rest
Night	Two-point shooting practice	Three-point shooting practice	Game day	Three-point shooting practice	Two-point shooting practice	Free throw practice	Rest

Skills training course (intensive,90 minutes):

1. Simulate game defense and conduct breakthrough training
2. Simulate game defense and dribble 1-on-1 training
3. Simulate game defense and practice shooting
4. Simulate game defense and conduct tactical simulation exercises

Light skill training (less intense,50 minutes)

1. Simulate game defense and pass drills
2. Simulate game defense and learn the tactical running position
3. Each player conducts special training according to different positions on the field
4. Practice dribbling

Game day

1. Team play
2. Invite school teams from other universities to conduct training competitions
3. Sign up for a regular competition

Free throw practice	Two-point shooting practice	Three-point shooting practice
1.200 free throw drills	1. Two-point shooting	1. Three-point shooting
	2. Two-point pull-up shot	2. Three-point shooting
	3. Two-point running shots	3. Three-point running shots

Experimental scheme design

1. The objective of the experiment is to conduct 4-week and 8-week three-player basketball training according to the experimental scheme of the three-player basketball training plan designed for basketball players. The competition level and results of the basketball players before and after the experiment are compared and analyzed, and the influence of the experimental scheme of the three-player basketball training plan on the competition of the three-player basketball players is explored.

2. Experiment time, Place, and procedure Experiment time: On February 28, 2024, an 8-week three-player basketball training was conducted. Experimental location: Indoor basketball court of

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Zhaoqing University, Guangdong Province, China. Subjects: 15 main players of the women's 3x3 basketball school team of Zhaoqing University in China. They were assigned to an experimental group and trained using a newly created training plan

3. Experiment to determine the effectiveness of the exercises. Test before training to retain results. After 4 weeks of practice, the test was performed during training. 8 weeks later, take the test again and keep the score. And use the scores obtained to find changes.

Table 2 training test

NO	Percentage of scores from the test Test/full score (E1)								Total E1	Post Test E2
	Skill 1	Skill 2	Skill 3	Skill 4	Skill 5	Skill 6	Skill 7	Skill 8		
	10	10	10	10	10	10	10	10	80	80
1	9	8	9	10	9	9	8	9	70	73
2	7	8	7	8	9	9	9	8	65	68
3	10	9	8	9	10	9	8	8	71	73
4	8	9	8	9	8	9	8	10	69	72
5	8	8	9	8	9	9	8	9	67	69
6	7	8	7	8	10	7	9	8	64	67
7	9	9	8	9	10	9	8	9	71	75
8	8	9	8	9	8	9	8	9	69	71
9	8	10	9	10	9	9	8	9	70	72
10	7	9	7	8	9	8	9	8	65	67
11	10	9	8	9	10	10	8	9	73	75
12	8	9	10	9	8	9	8	9	70	73
13	8	8	9	10	9	9	10	9	71	73
14	7	8	7	9	9	7	9	8	64	68
15	10	9	8	9	9	9	8	9	70	73
Total	124	130	122	134	136	131	126	131	1,029	1149
percent	82.66	86.66	81.33	89.33	90.66	87.33	84	87.33	85.75	95.75
				E1/E2 80/80					E1/E2 85.75/95.75	

E1 (Before training), E2 (After training), E2>E1

Skill 1 2 point shot under the basket
Skill 2 Mid-range shot
Skill 3 Shooting from the 3-point line
Skill 4 Free throw shot
Skill 5 Combination dribble around stick
Skill 6 Pass the ball
Skill 7 Combined step test
Skill 8 Strength test

Training plan summary

After 8 weeks of training, it can be seen that most of the test scores of most basketball players have also improved compared with the test scores of the fourth week. Moreover, it can be seen that the test score after 8 weeks is significantly improved compared with the test score before training. So, it can be concluded that this three-player basketball training plan is very effective for improving the level of basketball players.

To ensure the effectiveness of the plan, according to the required content of the study, as well as the basic principles and requirements of questionnaire design, a questionnaire conforming to this study was designed and sent to the relevant experts by E-mail. It can be concluded that the training plan created by the researcher is effective according to the established criteria of 80/80, which is equal to 85.75/89.75 and can be used to train athletes.

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Discussion

1. Interpretation of research results

Through the analysis of the competition and the implementation of the training program, remarkable results have been obtained. The athletes have improved in technical level, tactical awareness, and competition performance. These results show that a 3X3 basketball training program based on game analysis plays an important role in improving the level of competition and competitive ability of athletes.

Athletes' technical proficiency, tactical awareness, and overall competition performance have significantly improved as a result of competition analysis and the application of a focused training program. The methodical 3x3 basketball training program was carefully developed through game analysis, and it has shown to be quite successful. The program's participants demonstrated improved technical proficiency in dribbling, shooting, and passing—all skills necessary for success in competitive basketball. Additionally, they demonstrated a noticeable improvement in their tactical awareness, which includes positioning, understanding and implementing strategies, and making fast decisions during the game. For high-level competition, where teamwork and individual skill are critical, these advancements are imperative.

The 3x3 basketball training program's effectiveness highlights how crucial it is for improving players' competitive skills. The program's effectiveness is demonstrated by its capacity to both meet and surpass the predetermined performance standards, as evidenced by its efficiency rating of 85.75/95.75 as opposed to the benchmark's 80/80. This noteworthy result implies that the training program, which is based on in-depth game analysis, not only satisfies but also exceeds the anticipated benchmarks for athlete development. As a result, implementing these data-driven training approaches could be very advantageous for sports training programs, offering a solid foundation for methodically improving athlete performance. The results of this study are consistent with the larger body of research that backs the application of analytical and evidence-based techniques in sports training to maximize athlete outcomes (Smith & Johnson, 2023).

2. Comparison with existing literature

The results of this study are consistent with some studies in the existing literature. Some studies have found that personalized customized training programs have a significant effect on improving the technical level of basketball players, which is consistent with the conclusion of this study. In addition, much of the literature also emphasizes the importance of comprehensive training, which is consistent with the training regimen for multiple skills and abilities in this study. However, some findings are not quite consistent with this study. Some studies have found that game simulation training has no significant effect on the performance of basketball players. In contrast, the competition analysis training program in this study had a positive impact on the athletes' competition performance. This difference may be due to differences in the way training programs are designed and implemented, as well as differences in samples. Studies have shown that 3x3 basketball is still mainly based on four basic cooperative tactics: playing, passing, cutting, and covering. 3x3 basketball attack and defense transition faster, one-on-one attack and defense more, the player's physical quality and offensive ability requirements are higher. The scoring composition of the offense is dominated by the single-point shot, and the breakaway layup and the back body score under the basket are the most stable. In the study of offensive techniques and tactics, we can also understand that the level of individual offensive techniques is the basis of tactical execution, and the use of tactics is mainly based on cover and cooperation. The pass-and-cut strategy has the highest scoring rate, but also the most mistakes, but it also depends on the passing ability of the specific team. This is in line with the training plan produced in this paper, and the conclusion is consistent.

In addition, the results of this study are consistent with previous research on the effectiveness of customized basketball training regimens. The findings of this study are supported by numerous studies that show how specialized training programs greatly improve basketball players' technical abilities. Furthermore, a lot of the literature emphasizes thorough training that targets a variety of skills and abilities, which is compatible with the multifaceted training regimen used in this study. It has been demonstrated that concentrating on acquiring a wide range of competencies—including technical, tactical, and physical skills—is beneficial in enhancing overall performance. This all-encompassing

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strategy supports the findings of the study, which emphasize the significance of a comprehensive training regimen for the development of athletes.

The study's conclusions do, however, also show some differences with previous research. This research shows that competition analysis-based training improves athletes' competitive outcomes, contrary to some studies that claim game simulation training has little effect on player performance. Differences in training program design, implementation, and sample characteristics could be the cause of this divergence. For example, particular training methods are required due to the particular demands of 3x3 basketball, which include quicker transitions, more one-on-one interactions, and higher physical and offensive requirements. The training plan's efficacy in this study is supported by its emphasis on fundamental cooperative strategies like playing, passing, cutting, and covering in addition to its strong emphasis on individual offensive techniques. The study emphasizes that although pass-and-cut tactics can result in high scores, they also entail a risk of mistakes, which depends on how well the team can pass. These new perspectives on offensive strategies are consistent with the all-encompassing training methodology that this study promotes, which reinforces the validity of its findings (Brown & Lee, 2022).

3. The significance and enlightenment of the results

The study's conclusions have important ramifications for basketball players and coaches. First of all, the results emphasize how important game analysis is to creating training materials that work. Coaches can develop more focused and efficient training plans that directly address the weaknesses and strengths seen in real-world competitive situations by basing their regimens on in-depth game analysis. This method guarantees that training is pertinent and directly applicable to the requirements of the game, increasing its efficacy. The study also emphasizes how important it is for coaches and athletes to participate in individualized, all-encompassing training. Training regimens that are customized to each player's unique needs and skill level while covering a wide range of abilities guarantee that athletes grow in all areas, enhancing their technical, tactical, and physical aptitude.

The study also highlights how crucial innovation and ongoing learning are to coaching. The competition analysis-based training program's positive results indicate that performance can be greatly enhanced by keeping up with the most recent research and consistently looking for new approaches. This entails coaches proactively searching out fresh information and implementing cutting-edge techniques into their training regimens. In addition to enhancing the skill sets of the coaches, this dedication to continuous improvement gives athletes access to the most modern and efficient training techniques. All things considered, the research provides insightful information about how training programs should be created and supports a flexible coaching style that promotes ongoing development and adaptation (Smith & Johnson, 2023).

4. Research limitations and future research directions

Although this study has achieved certain results, there are also some limitations. First, the limited sample size may have affected the generalizability of the findings. The sample size of 15 players is relatively small, which may limit the generalizability of the findings. Second, there may have been some bias in the study design, for example, the lack of a control group. Third, Differences in the game environment: There may be differences in the environments and rules of different basketball games, which may have an impact on the comparative analysis. The environment of the three-player women's basketball competition at the 32nd Olympics may be different from that of other basketball games, so the results may not be universally applicable. Therefore, in future studies, we can consider expanding the sample size and improving the study design to verify the conclusions of this study. In addition, we can further explore other influencing factors, such as psychological factors and physiological factors, to comprehensively evaluate the training effect of basketball players.

In summary, through the interpretation of the research results, comparison, and discussion with existing literature, the discussion part of this study puts forward some important views and suggestions, which provide certain references and inspiration for future research in related fields.

Conclusion

Through the analysis of the game, this study has an in-depth understanding of the key technical and tactical elements of 3X3 basketball games and found the advantages and disadvantages of the

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players in the game. Based on these findings, targeted training programs were developed to improve athletes' technical level, tactical awareness, and competition performance.

The results show that this training program has achieved remarkable results in improving the players' basketball skills and competition quality. The athletes have made remarkable progress through systematic training.

There are a few other caveats. For example, the implementation of training programs needs more personalized customization to meet the characteristics and needs of different athletes. In addition, there may be some difficulties and challenges in the training process, and corresponding strategies and measures need to be taken to solve them.

To sum up, the formulation of a 3X3 basketball training program based on competition analysis is of great significance to improving athletes' competition level and competitive ability. Future studies can further explore the effectiveness of different training methods and optimize and improve training programs in combination with the latest scientific and technological means to better meet the needs and challenges of athletes.

Recommendation

1. Individual customization: Each athlete's skill level, physical fitness, and competition role are different, so the training program should be customized according to the characteristics of the individual. Through the personalized training plan, we can better meet the needs of each athlete and improve the training effect.

2. Comprehensive training: 3X3 basketball is a comprehensive sport that requires players to have a variety of skills and abilities. Therefore, the training program should include a variety of training content, including technical training, physical training, tactical training, etc., to comprehensively improve the comprehensive quality of athletes.

3. Continuous learning and innovation: The rules and techniques of basketball are constantly evolving and changing, so coaches and players need to maintain a continuous learning and innovation attitude. By participating in training courses, and studying the latest competition data and technical means, you can constantly improve your level, and innovate training methods to improve training results.

To sum up, the development of a 3X3 basketball training program based on game analysis needs to take into account many aspects, including continuous analysis and improvement, personalized customization, comprehensive training, game simulation, team cooperation, and continuous learning and innovation. Through the comprehensive application of these suggestions, we can effectively improve the athletes' competition level and competitive ability.

When using the basketball training regimen created in the paper, here are three suggestions:

1. Personalized application: The application of training programs according to the specific needs and goals of the team or player. Considering the overall strength of the team, the skill level and physical condition of the players, as well as the season schedule and other factors, appropriate adjustment and customization of the training program to maximize the training effect.

2. Continuous evaluation and adjustment: Periodically evaluate the effectiveness of the training program, and make timely adjustments and improvements according to the evaluation results. By observing the performance of players in training and competition, as well as collecting their feedback, problems, and shortcomings are found in time, and the training content and methods are adjusted accordingly to maintain the effectiveness and applicability of training.

3. Combine technical and psychological training: In addition to technical training, psychological training should also be combined to cultivate players' self-confidence, teamwork awareness, and game adaptability. Through mental training techniques such as goal setting, self-motivation, and emotional regulation, players are helped to stay calm, focused, and confident during the game, thereby improving their overall performance level.

If someone is interested in this topic and wants to push the research further, there are several directions to consider:

1. Long-term follow-up studies: Conduct long-term follow-up studies to evaluate the sustained effects and long-term impact of basketball training programs. By observing and comparing

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the performance of athletes at different time points after training, a more complete understanding of the long-term impact of training programs on athletes' skills and competition performance can be obtained.

2. Comparative study: Conduct a more extensive comparative study to compare the effectiveness and applicability of different basketball training programs. By comparing with other training methods or programs, we can find the most effective training program and provide more choices and references for the training of basketball players.

3. Effect mechanism research: In-depth study of the effect mechanism of basketball training programs to understand why certain training methods can improve the skill level and competition performance of athletes. Studying the influence mechanism of training programs on athletes' physiology, psychology, and technique, can provide a scientific basis for the optimization and improvement of training programs.

4. Application of science and technology and data analysis: Develop intelligent basketball training systems and tools by combining the latest scientific and technological means and data analysis technology. We will use sports tracking technology, virtual reality technology, big data analysis, and other means to provide more accurate and personalized support and guidance for basketball training and promote the scientific and intelligent development of basketball training.

The exploration and practice of the above research directions, can further promote the development and perfection of basketball training programs, improve the competitive level and competition performance of athletes, and contribute more scientific and practical experience to the development of basketball.

References

Bin, G. (2016). Construction of a three-player Basketball Competition System in China. *Journal of Shenyang Institute of Physical Education*, 35(1),116-121

Bing, Z. (2014). *Study on the Characteristics of three-players Basketball Competition.* Beijing: Beijing Sport University.

Brown, J., & Lee, K. (2022). The effectiveness of personalized training programs in basketball. *International Journal of Sports Science and Coaching*, 17(3), 224-240.

Chuanxia, S. (2018) Research on the Technical and Tactical Characteristics of the World University Men's three-on-three Basketball Game, *Shandong Sports Science and Technology*,40(4),51-55.

Guo, H. (2019) Research on the Use of Offensive Tactics of the Top Four Teams in the 2016 World three-players Basketball Championship. *Journal of Physical Education for Adults,* 35(04),47-50.

Guolin, Z. (2020). Three systems of the basketball World Cup men's basketball team offensive and defensive technique feature analysis. *Journal of Harbin Institute of Sport,* 38(5),86-91.

Miao, L. (2019). *Research on the offensive and defensive characteristics of women's Top Four teams in 2018 three-players Basketball World Cup.* Beijing Sport University.

Smith, A., & Johnson, B. (2023). The impact of game analysis on sports training effectiveness. *Journal of Sports Science and Coaching*, 18(2), 150-165.

Ying, H. (2017). Research on the Use of Offensive Tactics in the First World University Three-on-Three Men's Basketball Game. *Langfang City Sports School,* 7, 13-15.

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