Relationship between Physical Training and Tactical Training in Sports Training Relying on Boosting and Bagging Algorithms

Kaining Liu,1 Xinwen Li,1 and Christine A. Rochester2

1Department of Physical Education, University of Electronic Science and Technology of China, Chengdu, Sichuan 610054, China
2Department of Exercise Science, Physical Education and Recreation of Colorado State University- Pueblo, Pueblo, CO 81001, USA

Correspondence should be addressed to Kaining Liu; liukaining@uestc.edu.cn

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With the development of sports, competition is becoming more and more confrontational and modern sports are developing in the direction of fast speed, fast rhythm, good skills, and high-altitude combat. And, this development requires good conditions and technology as a guarantee. Sports denote a competitive physical activity, which follows four aspects of competition: technology is the foundation, tactics are the means, the body is the cornerstone, and the psychology is the decisive point. Among these four factors, if the athlete does not have a good body, all techniques and know-how are empty talks. In this paper, two algorithms are introduced to track the athletes’ physical training and tactical training videos and the relevant data in the game are counted to obtain the physical indicators required by the athletes in each position. In a certain game, the sprint distance in the first round was 1979 m, the high-speed running distance was 2426 m, the high-intensity running distance was 4398 m, and the jogging distance was 1267 m.

1. Introduction

With the improvement of human safety awareness in social life and the demand for intelligent sensing and measurement systems, moving target tracking technology has been widely developed and applied and has become an important research area in the field of computer vision. Using moving object video tracking, the task is to further determine the position of moving objects in each frame based on the conditional and temporal correlations of video information.

In daily training, it is very important to train the athlete’s technique, tactics, and physical fitness. The focus of training should not be shifted to physical training because of poor physical fitness. In the long run, this will lead to a decline in the technical level of the athletes and lack of strategic thinking and only a good state will not win the game, so it is very important to study the relationship between tactical training and physical training.

Regarding sports training, relevant scientists have done the following research. Ahmadi A proposed a novel on the walking motion analysis framework. It is envisaged that the proposed framework can be used for accurate and automated physical activity classification and reliable sports technique assessment in a variety of unconstrained settings for injury management and performance improvement [1]. Tong and Li proposed an exploratory hybrid structural equation modeling framework for functional training decision-making in competitive sports training. The training environment will allow competitors to weigh their choices, decisions, and mistakes. It provides modest evidence of improved reaction times due to the decision learning module [2]. Kumyaito proposes an individualized athletic training program that specifies an individualized performance training schedule to optimize athlete performance. The results show that by applying the genetic algorithm modified by the constraint method, an optimized exercise training plan can be realized and finally the goal of improving the sports performance can be achieved [3]. The purpose of the Pérez–Turpin study was to determine the results of the analysis of men’s single and double outdoor
badminton matches and to determine the relationship between technical and tactical aspects in a study organized by the Badminton World Federation. It confirms the applicability of computer symbolic analysis in determining the properties of outdoor beach badminton [4]. Sobko et al. developed and experimentally confirmed the use of video manuals in youth basketball referee season sports training. With the help of this manual, it is possible to determine the level of sophistication of young basketball referees and their psychophysiological abilities. The results showed that the technical, physical, and functional readiness indicators of basketball referees in the experimental group were significantly improved [5]. Shao introduced the auxiliary decision support system for college students’ physical training. He introduced network security methods and designed a decision support system for sports training based on network security. The designed sports training decision support system based on the improved association rule prior algorithm has good applicability and efficiency [6]. Martinescu-Bdlan and Macovei proposed that the training process and the adaptation of the body are a multifactorial process. The body’s adaptation to these factors is directly related to the methods and means used. During the training process, a series of principles and rules must be followed, which help ensure the correct operation of the athlete’s training system [7]. Wei et al. reviewed the existing artificial intelligence application research. Based on the basic concepts of artificial intelligence and related research results, the study discussed three specific cases of artificial intelligence application in sports training. It explores the close relationship between artificial intelligence technology and sports training and highlights the advantages of artificial intelligence, including utilization, convenience, and innovation [8]. Aiming at the problem of low classification accuracy caused by the randomness of objective motion in sports training videos, Xu studied a deep learning-based sports training video classification model. The experimental results show that the model can effectively solve the problem of target movement randomness and the classification speed is faster [9]. Taking the diving team as an example, Zhao expounds on the role and significance of scientific training in developing competitive sports in ordinary colleges and universities and puts forward suggestions on the establishment, organization, and implementation of scientific training. The training of the diving team shows that scientific and systematic training is an important guarantee for the cultivation of high-level student athletes in ordinary colleges and universities [10]. Zhang et al. proposed a decision support model for motion training based on association rules. They used the posterior probability setting to reveal the weights of the discriminative power of attribute terms and set the classification performance to reflect the weights of the three measures that evaluate credit contribution. Effective sports training enables coaches to formulate corresponding countermeasures and achieve scientific management [11]. Ba takes sports videos as the analysis object and uses quadratic interpolation to improve it because of the large error between the RSSI value and the actual value when the positioning algorithm uses linear interpolation to calculate virtual tags. The results show that the algorithm of this study has a certain practical effect [12]. Reutskaya and Poltoratskaya studied the static stability characteristics of skiers during the exercise training phase. They recruited skiers who had gone through different stages of athletic training. It reveals the characteristics of the static stability of skiers in different sports training stages and helps to determine the standards and scales for the differential assessment of the development level of skiers’ static stability in different sports training stages [13]. Based on the characteristics of athletes, Ma developed and designed a monitoring system for athletes’ training process based on mobile artificial intelligence terminal technology. He uses GPS to obtain real-time location information of athletes and provides real-time guidance for athletes, revealing the changing laws of various indicators of athletes during training [14]. Reutskaya and Poltoratskaya studied the plausibility of skiers’ movements in different sports training stages. Comparative characterization of the speed components of skiers in time trials showed that skiers experienced significant reductions in cycle frequency and cycle length during the athletic training phase. The higher movement velocity is maintained by the velocity component of the movement technique [15]. These methods provide some references for research, but due to the short time and small sample size of the relevant research, this research has not been recognized by the public.

The innovation of this paper is that two algorithms are introduced, the flow chart of the target tracking algorithm is obtained, and the target tracking of the athletes in the competition and training is carried out to obtain the data required for the research. In this paper, the average center position error and average overlap rate of the tracking results are obtained and analyzed. In this paper, the physical indicators of athletes in various positions are detected and the physical characteristics of athletes in various positions are summarized and analyzed.

2. Methods on the Relationship between Physical Training and Tactical Training

2.1. Boosting and Bagging Algorithms. A boosting algorithm is a mechanical algorithm that can be used to reduce bias in learning. Most addition algorithms involve reusing less-learned classifications and adding the results to the state-of-the-art learned rank. During the mixing process, different weights are usually provided according to the accuracy of their classification. After weak learners are added, the data are usually weighted to confirm the classification of previously classified data points [16].

Boosting is a machine learning technique that can be used for regression and classification problems. The lifting algorithm is essentially an iterative algorithm. In this technology, a weak classification prediction model (such as a decision tree) is generated at each step, and weighted accumulation is performed to achieve the purpose of continuously using a weak classifier to make up for the previous weak classifier. Figure 1 shows a schematic diagram of the boosting process of the Boosting algorithm.
In the training loop process, weighting the misclassified samples is an effective way to speed up the training. Since the weak classifier with a high accuracy rate in training has a larger weight, there will be more and more correctly classified samples in a new round of training. Training samples with smaller weights have less effect on the new round of training; that is, each new round of training focuses on training misclassified samples. SJ_hereweak classifiers in actual training are the same, but the actual training data used by the weak classifiers are different. Usually, each dimension of the feature vector is used to form a weak classifier \[17\].

Suppose the desired final prediction model is

\[ F(m) = \sum_{a=1}^{M} \eta_a r_a(m), \]  

where \( r(m) \) is the basis function. The loss function of \( P(m) \) is

\[ P(n, F(m)) = \frac{1}{2} (n - F(m))^2, \]  

where \( n \) is the actual value and \( F(m) \) is the predictive value. We find the optimal step size using linear search.

\[ \zeta_m = \arg \min_{\zeta} \sum_{a=1}^{b} P(n_a, F_{a-1}(m_a) + \zeta \cdot t_a(m_a)), \]  

where \( F(m) \) is the hypothetical optimal function, \( n_a \) is the weight, and \( P \) is the loss function.

We predict the best predictive model.

\[ F_a(m) = F_{a-1}(m) + \sum_{\bar{a}=1}^{Y} \zeta_{\bar{a}} I, \]

\[ \zeta_{\bar{a}} = \arg \min_{\zeta} \sum_{m \in R_{\bar{a}}} P(n_a, F_{a-1}(m) + \zeta \cdot t_a(m)). \]  

Bagging algorithm is a group learning algorithm in machine learning. The Bagging algorithm can be combined with other classification and regression algorithms to improve its accuracy and stability and at the same time reduce the variance of the results to avoid overfitting. The algorithm is a technique that reduces common errors by combining multiple types. The main idea is to train several models separately and then select all models for test results. This is an example of a traditional machine learning method called model averaging, and the technique used in this example is called the aggregation method.

The Bagging algorithm is a method to improve the accuracy of weak sorting algorithms by creating a set of prediction functions and then combining them concretely into prediction functions. It is a framing algorithm that involves primarily processing of a subset of the model and then training the model using a weak ranking algorithm to create a basic set of classifications. A multilayer neural network is an artificial neural network that develops and maps regions of input vectors to regions of output vectors. MLP neural systems have the ability to solve linear and integral problems and are well suited for solving classical problems. Bagging algorithms are suitable for integration with unstable analysis algorithms. Unstable learning disabilities generally include neural networks and decision trees. Instability is when there is a small change in the...
ensemble of training models, and the results of the model can change dramatically. Thus, training with two different training sets results in different classifications that may have similar accuracies but with different parameters (e.g., initial neural system weights), resulting in differences in inclusion. By choosing this classification prediction, transport reduces common errors by minimizing the variance produced by the main classification. Bagging algorithms, on the other hand, can train weak classes to create strong classes in a special way.

The specific implementation method is as follows:

\[
E_{\text{training}} = (m_u^u, n_u^u) \quad u = 1, 2, \ldots, N, \quad (8)
\]

where \( N \) is the number of samples in the original training set, \( m_u^u \) is the input volume of the sample, and \( n_u^u \) is the actual load value.

The final prediction result is

\[
\bar{n}_{\text{test}} = \frac{1}{S} \sum_{i=1}^{S} n_{\text{test}}^i,
\]

where \( S \) is the number of neural network models and \( n_{\text{test}}^i \) is the forecast load.

\[
q_u = \frac{AUD_u}{\sum_{v=1}^{R} AUD_v},
\]

\[
L(m) = \arg \max_{u=1}^{R} \sum_{u=1}^{R} q_u h_u(m), \quad (10)
\]

\[
g_u = \frac{AUD_u}{\sum_{v=1}^{R} AUD_v},
\]

where \( q \) is the integrated classifier and \( h_u(m) \) represents the weights of base classifiers.

\[
G(q_0) = \frac{B | f(l_0) = q_0 \Lambda f(l_u) = q_u | l_u - l_0 | = 1 |}{8B | f(l_0) = q_0 |}, \quad (11)
\]

where \( G \) represents the samples forming the training set and \( B \) stands for training individual learners.

The schematic diagram of the algorithm is shown in Figure 2.

The offline boosting algorithm prepares a large number of positive and negative samples in advance and obtains the classifier through offline training. Its training time is relatively long, the prepared samples cannot cover all the situations in the actual scene, and it is prone to drift. The online boosting algorithm is trained once with a sample, and the classifier is obtained by online training. It can update the classifier online according to the changes in the actual scene, and the training period is short.

2.2. Physical Training and Tactical Training. Physical fitness refers to the athletic ability of an athlete's body. It is one of the indispensable components of competitive athletic ability, and it is also the comprehensive athletic ability required by various bodies to improve athletes’ competition performance and technical and tactical levels. Physical exercise refers to the training of the physical ability to exercise continuously for a long time under stressful and tense conditions, even in sports. The purpose of physical exercise is to create physical and mental adaptation to the human body by increasing the load of adaptive training and exercise for various organs and systems of the human body. It improves the athletic ability of the human body and cultivates the will of the athletes to train hard and fight tenaciously.

General strength training is a comprehensive strength training that uses a variety of nonspecific training methods to improve an athlete’s physical fitness, improve form, and manage nonspecific athletic strategies, skills, and knowledge. It creates special conditions for improving sports technology. Specific training suggestions and training methods should be closely related to specific characteristics. It promotes the development of important athletic qualities in specific sports. Using training methods that can directly improve specific qualities, training closely related to a specific sport acquires knowledge and skills related to specific techniques and skills and helps to improve the performance and technical level of a specific sport. When planning a general physical activity, people are not developing and improving all body parts, systems, organs, and exercises comprehensively and vigorously but are doing exercises based on an individual’s specific circumstances and needs. Special sports must be scientifically and rationally compiled through special education content. Different training directions have different demands on the body, so general training cannot replace specific training.

General physical training and special physical training should be arranged reasonably. General physical training can comprehensively develop athletes’ athletic qualities such as strength, endurance, speed, agility, coordination, and flexibility. It improves the function of various organ systems of athletes, so that the athletes’ bodies can develop in a balanced way. At the same time, it improves the fitness level of athletes through general physical training. The purpose of special physical training is to make the physical fitness obtained by athletes directly serve to improve sports performance. General physical fitness training serves for special physical fitness training, while special physical fitness training directly serves to improve the overall competitive level of athletes.
When choosing a training method, it should be similar to the technical movements with certain biomechanical characteristics and the physical training should not be separated from the training of overall characteristics such as technology, tactics, and psychology. Physical training does not have to be an isolated educational system. In the training process, if it is separated from techniques and tactics, it does not meet the requirements of being closely integrated with certain sports and the expected training effect cannot be achieved. For athletes, psychology and intelligence are especially important. Physical training often includes a lot of exercise, which can easily lead to insufficient mental endurance of athletes. Therefore, athletes should be aware of the importance of training, combining science and training, so that training is not easy or boring.

When determining the relationship between general training and special training in the training process, coaches should design a training content that varies from team to individual. In terms of time arrangement, it is recommended that coaches plan physical training according to factors such as competition time and athletes’ physiological periods. Combined with the special characteristics, this article obtains some basic physical training content. The content differing from person to person means that different training contents are arranged for different athletes. The physical function of each athlete cannot be exactly the same. Therefore, when performing physical training, it should be different from person to person and cannot be generalized. Only in this way, physical training can achieve better training effects; otherwise, it will reduce the physical fitness level of athletes.

The plasticity of each athletic quality is different, and there is a rapid growth period. Therefore, when training, we should grasp the favorable opportunity according to the sensitive period of different physical qualities, so that the relevant characteristics can be developed accordingly. Sensitivity to the development of sports quality means that any sport at a certain age, based on the natural growth and development of children and adolescents, develops rapidly and is in the best development period. Training should use this time in advance to fully develop the athletic qualities that meet the needs of specific sports or directly serve specific purposes and lay a solid foundation for good results.

Competitive sports are an important part of sports. It is a social sports activity with sports competition as its main feature and the main goal of creating excellent sports results and winning competitions. Competitive sports are gradually formed and developed in the process of human development. Competitive sports have also established a relatively complete management system in the process of development. It contains four parts: athlete selection, sports training, sports competition, and competitive sports management. There are four major elements of modern competitive ability: technology is the foundation, tactics are the means, the body is the cornerstone, and the psychology is the decisive point.

Because physical training is an energy-intensive training, some forms of training are also boring, which is why athletes often feel tired during training. Therefore, in daily training, it is necessary to strengthen the education of athletes’ emotions and qualities and to improve athletes’ awareness of the importance of physical education. Coaches should adopt effective training methods to increase athletes’ interest in training and reduce athletes’ mentality of training fatigue. And, coaches should make players clearly aware of the importance of physical fitness [18].

Before the test, you should understand the athlete’s health status and be adequately prepared for the safety hazards that the test may bring. For example, if the athlete’s waist injury has not healed, the maximum strength and sitting forward flexion tests can be temporarily suspended. In addition, it is necessary to check in advance whether the test equipment and environment are potentially dangerous during the test, etc. In test combinations and multiple tests, the recovery time can be determined by the athlete’s pulse and experience. It should be noted that after the index test reflecting the extreme state of the athlete, the athlete should be given sufficient recovery time so as not to affect the subsequent test results.

The human body is an organic whole, a complete system. Therefore, the general physical fitness and the specific physical fitness of athletes are interrelated, influencing, and interdependent. General physical qualities include endurance, speed, strength, agility, flexibility, and coordination. Endurance is one of the important indicators of athlete’s physical fitness. There are many sports such as ball games, cycling, swimming, mountaineering, middle-distance running, and race walking in track and field sports. The improvement of technical level and the achievement of competition results often depend on the level of endurance. And, some sports that do not require high aerobic endurance, such as weightlifting, diving, and gymnastics, will also have higher requirements for specific endurance. Good endurance is also an important prerequisite for accelerating physical recovery after heavy-duty training. Endurance quality can be divided into many types according to different standards, and different training methods should be used in training for different types of endurance.

3. Experiments on the Relationship between Physical Training and Tactical Training

The development of machine learning theory has had a profound impact on related fields, especially in research fields that require big data processing. Therefore, cluster learning, as an important discipline in machine learning, has had a significant impact in the fields of model analysis and computer vision. Boosting and Bagging algorithms are two common swarm learning algorithms. Initially, both algorithms were trained offline with a large number of models, so we can use them directly. Since offline training takes time, the algorithm changes after training and new models cannot be added later to update and improve classification skills. The proposed algorithm model is used to track the target of the athletes, so as to better perform physical training and tactical training. Figure 3 shows the flow chart of the target tracking algorithm.
The online boosting moving target tracking algorithm is a target tracking algorithm based on statistical learning, which regards the target tracking problem as a two-class problem of the target and background. Moreover, it does not describe the appearance of the target by establishing a complex model and then uses the model-matching method to track the target but to find a decision boundary that can effectively distinguish the target from the background. Then, it uses this decision boundary to get the specific location of the tracking target. The main principle is to first obtain a set of weak classifiers by online training and linearly combine these weak classifiers into a final strong classifier according to their corresponding voting weights. Then, it uses this strong classifier to evaluate each rectangular block in the search area of the current frame picture and returns a confidence value. After all rectangular blocks are evaluated, a confidence matrix will be obtained, in which the maximum confidence value is found and the corresponding rectangular block is the target to be tracked. Finally, if the target is tracked in the current frame, in order to adapt to the changes of the target appearance and background environment, all the weak classifiers are updated online using the current frame image.

The advantage of the online boosting algorithm is that the tracking problem is considered as an evaluation problem and the appropriate target attributes are selected in real time according to the changes of the tracking target. However, the main problem with this approach is that due to other conditions such as occlusion, any change in the target features may lead to an increase in the number of errors and accumulate errors after long-term execution. The experimental analysis shows that the selector in the online boosting algorithm increases the weight, which leads to the offset. However, the shutdown monitoring problem actually only affects the local region, not the global region [19]. The framework of the target tracking system is shown in Figure 4.

In the principle of online boosting, first, the selector chooses the weakest level with the least error, determines the appropriate voting weight, and continues to transfer the critical weight to the next selector. The previous steps take into account the influence of all elements and whether the result is correct or the weight of one selector in front affects the weight of the next selector. But, the selector result affects only local regions, not all regions. If the function selected by the previous selector is good, no matter whether the function selected by the latter selector is good or bad, the corresponding weight must be reduced. If there is a problem with the previous function of the next selector, this causes the corresponding selector weight to drop rapidly [20]. The average weight of selectors is shown in Table 1.

The corresponding weight of the selector drops rapidly, and the weight of the previous selectors determines the performance of the final classifier. Therefore, when the weights of the previous selectors are wrong, the drift of the tracking target is inevitable. Online adaptive learning target
tracking often suffers from target drift, which is mainly caused by errors introduced by the tracker each time the tracker is updated. Figure 5 shows a schematic diagram of an object tracker with a detector.

In order to detect the target and adapt to changes in the target scene, etc., the update of the detector should be more sure that it is the correct target tracked before, so that it can be used as a positive sample to update the detector. With a "more confident object" detector, it can be used to identify false objects in some indistinguishable scenes. The relationship between the detector and tracking is shown in Figure 6.

The tracking rate to the target is tested with a large amount of video data, as shown in Table 2 for the experimental results.

The average center position error is the average of the pixel offsets between the center point position of the tracked target block and the center point position of the real target block in all frames of the video sequence. The tracking success rate is the ratio of the number of successful tracking frames to the total number of frames in all frames of the video sequence.

\[
AE = \frac{\sum_{u=1}^{B} \sqrt{(m_{tu} - m_{ru})^2 + (n_{tu} - n_{ru})^2}}{B},
\]  

where \(B\) is the total number of frames in the video sequence, \((m_{tu}, n_{tu})\) denotes the coordinates of the center point of the target block, and \((m_{ru}, n_{ru})\) denotes the coordinates of the center point of the real target block.

For detailed quantitative and qualitative analysis and comparison, Table 3 shows the average center position error of the tracking results.

The average center position error of the SB algorithm is reduced by 61.4% compared with the OB algorithm, and the center position error is reduced by 48.8% compared with the CT algorithm.

The average overlap rate of the tracking results is shown in Table 4.

The average tracking overlap rate of the SB algorithm is more than double rate of the OB algorithm and 28.5% higher than that of the CT algorithm.
3.1. Target Identification for Each Athlete in the Athlete’s Physical Training Videos and Tactical Training Videos. Tactical awareness can be manifested in the fact that in order to defeat the opponent in the fierce confrontation and for flexible tactical application, according to the actual situation of the two sides on the field, the players correctly use the technology, rationally control their actions, and have a certain purpose. An athlete’s instantaneous decision-making ability on the spot is a full reflection of whether a player has truly grown up and whether he has rich on-the-spot
experience. Figure 7 shows the comparison of the number of passes in different positions by players in the four games.

No matter where the athlete is on the court, when he makes a tactical decision to pass the ball, he must first observe the movement of his own players and the distribution of the players on the court in different areas. The selection of the passing objects shows a certain degree of preference and orderliness. Before Kongka passes the ball, the priority is to observe the positional distribution and movement of the players in the center, followed by the connection or support of the players on the wing.

Many behaviors of the players in the game have a certain purpose. All the actions of the players in the offense have a certain tactical purpose in a sense. However, the purpose of this activity of the players begins before their tactical activities. Before the players make any tactical action, there will be subjective considerations and predictions about the positions of teammates and defenders on the field, the possible neutral positions on the field, the crossover of teammates in different positions, and which position players will most threaten the opponent’s goal after receiving the ball. Under the domination of tactical guiding ideology, football players consciously change their tactical behaviors to maximize their own advantages and, at the same time, compress the opponent’s “living space” to the greatest extent, so that the opponent’s own advantages cannot be effectively played.

The main task of the frontcourt players is to break through the opponent’s line of defense, score goals, and win
the game. Therefore, any tactical activities undertaken by the strikers should revolve around this task. As shown in Figure 8, the physical structure characteristics of frontcourt players are shown.

It can be seen that the height of the players in the frontcourt is increasing, and the body should be strong. The reason is that in the fierce physical confrontation, in order to seize the opportunity and complete the coordination of various techniques and tactics, the frontcourt players are required to have a strong body as the foundation. Athletes are tall and, in a certain sense, are more likely to gain a space advantage than other players; especially in the process of competing for the high-altitude ball, a certain height advantage has already taken the lead in position. In the daily training, attention should be paid to the training of the agility and coordination of the players in the frontcourt position, so as to improve the ability of the players to shoot without losing the opportunity after getting rid of the defense. The running of the striker is often accompanied by the suppression of the opposing defender. Whether it is passing the ball or dribbling the ball, there will be direct physical confrontation with the defender. Therefore, in the usual training, it is closer to the reality of the game, which strengthens the confrontation of the practice and pays attention to the practice of the players’ strength and speed.

![Figure 10: Statistics of the running distance per game.](image-url)
The midfielder plays a linking role in the game, playing the role of passing the ball for the forwards in the attack, supporting the attack in the frontcourt, and completing the tactical cooperation with the teammates in the frontcourt. In the defense, this delays the speed of the opponent’s advance in the own half and assists the players in the backcourt to strengthen the defense. Keeping their own goal is the main task of the backcourt players in the game. However, in the game, in order to form a local advantage in terms of numbers, the fullbacks often assist in the opponent’s half, forming a situation of playing more and playing less. Figure 9 shows the physical characteristics that midfielders and backfielders should have.

The midfielders have certain positional characteristics, but there is no height index in the morphological indicators, indicating that the height has little influence on the midfield players but requires a certain degree of physical fulfillment. The midfielder’s legs should be explosive, and, at the same time, they should have a certain speed. When the backcourt players are based on highly developed aerobic tolerance in terms of body performance, they must also have a good anaerobic energy supply capacity. In the training, on the basis of improving the aerobic metabolism of the players, we should combine the characteristics of the project and pay attention to the development of the speed endurance of the players. It applies various runs used in the competition (back run, side run, plunge or cut run, turn run, etc.) to the usual training.

In the training, attention should be paid to the improvement of the anaerobic metabolism of the players and the speed and strength of the players should be improved in a targeted manner.

The physical state of players on the field is often shown by running in the game, and the strength of running ability directly reflects the physical development level of a player. There are not many opportunities for players to really control the ball in the game, and most of the time in a game goes for tactical running or coping without the ball. Figure 10 shows the average running distance per game.

It can be seen that the players faced fierce competition in the game, the exercise intensity was large, and the physical energy consumption was also relatively large. The sufficient physical fitness of the players can ensure the high efficiency of the offense and the effectiveness of the defense.

4. Discussion

When coaches do tactical training, physical training can easily be overlooked. In the second half of the training, tactical training tends to take place in the training. The first half is usually individual strategy training and team strategy training. In the first half, the best training is warm-up and technical training. However, when it comes to tactical training, most teams let players learn new tactics first. They usually run or walk while strategizing. In order to learn the technique, the coach asks the athlete to passively defend from the beginning and learn the technique with the opponent. The athlete should gradually increase the speed and efficiency of the technique while simply learning the technique. However, this training method allows emerging athletes to practice basic techniques and minimize training conditions. Tactics are what the team needs to learn and improve over the long term, and they are the soul of the team. In order to maintain an athlete’s fitness level and improve training skills, different tactics can use different training methods.

Breaking a press defense requires a clear-headed, decisive player who has limited time to pass the ball to the right area of the court and maintain reasonable offensive space. Teams that often use pressing defenses also put themselves on the cusp, because behind the pressing defense, it is more likely to be unguarded or there is the situation of playing more and less after being broken by the offensive team. When breaking the pressing defense, people should dribble the ball reasonably and try not to stop the ball at one time; otherwise, it is easy for the opponent to come forward and attack. Offensive players should be clear-headed, aware that the ball only has seconds to move from the backcourt to the frontcourt, and avoid defending the “hot zone,” which is the corner or corner area. When passing and receiving the ball, players should not stand in place and wait for the ball but move forward to receive the ball, which forces the defender to move and easily creates a defensive neutral. The offensive player’s eyes should not leave the ball. Otherwise, when a pinch attack occurs, the player’s line of sight will be small and they will fight alone, making it easy for the defender to steal and drop the ball.

5. Conclusion

The goal of attack tactics used in sports is to defeat the opponent and win the game. This offensive tactic can be achieved through individual breakthroughs or teamwork, which requires players on the field to perform the same tactical actions based on the actual situation. Many sports games today are characterized by full attack, full defense, and full control over everything on the field. This paper focuses on tracking moving objects in video sequence images and mainly studies and analyzes online boosting algorithms based on statistical learning methods. In this paper, the preliminary prediction research is carried out. In view of the limited data sources and academic level, there are inevitably some omissions in the research. The analysis of the status quo analysis stage is not thorough enough, and it only shows the changes of relevant indicators and lacks internal judgment analysis. At the stage of theoretical research, this paper does not have a deep grasp of the theory. The SB algorithm is a multiclassifier tracking system, which requires a lot of time for training and updating and is not suitable for scenarios with high real-time requirements.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that there are no conflicts of interest.
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