Research Article

Construction and Evaluation of Sports Rehabilitation Training Model under Intelligent Health Monitoring

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Sports rehabilitation training is a comprehensive discipline that solves and helps motor function recovery through physical exercise, also known as rehabilitation sports training. Sports rehabilitation training can help athletes restore health, treat injuries, prevent recurrence, improve physical fitness, and meet the needs of daily training. Starting from the concept of sports rehabilitation training, this paper analyzes the application of sports rehabilitation training in physical training and summarizes and analyzes the role of sports rehabilitation training. It provides reference for the application of physical rehabilitation training in sports training. Intelligent health monitoring technology has been widely used and developed, and many classic algorithms have emerged to complete the extraction of moving targets. This paper is aimed at studying the application of intelligent health monitoring to the construction of sports rehabilitation training models. It proposes the overall design of the intelligent health monitoring terminal and the common algorithms for moving target monitoring, such as optical flow method, frame difference method, and background difference method. It takes the rehabilitation training of an athlete in X city as an example to establish a model study. The final result of the experiment through sports rehabilitation training under intelligent health monitoring is that 92.6% of the athletes recovered from sports injuries through rehabilitation physical training.

1. Introduction

With the rapid economic and social development and the improvement of people’s living standards, people pay more and more attention to their own health. At present, the world’s total population is huge, coupled with the influence of environmental, biological, and other factors, health problems are prominent, and various diseases threaten human health. As a rehabilitation exercise discipline, sports rehabilitation training has been widely used [1]. Therefore, the requirements for details are higher in physical exercise. Fitness rehabilitation training has special value in sports training. Athletes must clarify the key points and difficulties in sports training and make daily plans. As a special sport, physical rehabilitation training has certain functional value. Rehabilitation training mainly uses training methods to exercise. How to take an effective way to effectively combine the physical health and physical fitness of sports players is very important. Physical rehabilitation training and practical training effectively combine specific practical content. This enables sports training to be applied in practice and promotes the stable development of sports rehabilitation training.

Nowadays, moving target detection technology has received extensive attention from all walks of life. In real life, intelligent health monitoring technology has been widely used and developed by leaps and bounds. It has also emerged many classical algorithms to complete the extraction of moving targets. Sports rehabilitation training is a special sports project with certain functional value, and fitness rehabilitation training is mainly carried out through training. In the process of sports training, a new and innovative exercise program should be established. It is necessary to give full play to the physical rehabilitation training in sports training and physical rehabilitation sports training. It should establish a practical, innovative exercise program. This can
ensure that athletes maintain a good psychological state and provide high-quality rehabilitation services for athletes, so as to achieve rehabilitation training.

The innovations of this paper are as follows: (1) The application of intelligent monitoring and monitoring to the sports rehabilitation training model is innovative. (2) It can provide some useful references for the enrichment and improvement of the theoretical content system of sports training. (3) It provides useful help and guidance for athletes to prevent sports injuries, get rid of injuries, and better improve sports performance.

2. Related Work

With the development of science and technology, the intelligent health detection system has penetrated into all aspects of people’s lives, and more and more scholars are studying it [2, 3]. Tire durability plays an important role in road transport safety. Damaged tires can cause vehicle instability and potential traffic accidents. To investigate the potential of the smart tire concept for tire health monitoring, Behroozinia developed a computational method for tire structural defect detection. It compares the acceleration signal trends of undamaged and damaged tires and can reveal information about the length and location of cracks around the tire perimeter. To achieve this, Behroozinia used an implicit dynamic analysis method to build a finite element model of the smart tire. Additionally, using data from the model, he developed a health monitoring algorithm. It is used to predict crack locations using acceleration signals obtained from a triaxial accelerometer attached to the tire inner liner. It has been observed that the radial component of the acceleration signal plays a key role in the defect detection of smart tires [4]. With the explosive development of smart wearable devices, the problems of massive energy waste and environmental pollution caused by electronic waste need to be solved urgently. Here, chewed gum is a single-use waste that can be simply reused for wearable iontronics. Cheng and Wu regularly stretched the chewed gum in 6 M NaCl aqueous solution or even Chinese edible salt solution to increase ionic conductivity by smart health monitoring. Here, this gingival sensor can be effectively used for real-time human health monitoring and shows a fast response time of 297 ms and reliable cycle performance for body motion monitoring [5]. Electric vehicles have become an important part of the future of transportation. Detection, diagnosis, and prediction of electric drive failures are improving the reliability of electric vehicles. Permanent magnet synchronous motor drives are widely used due to their dynamic performance, higher power density, and higher efficiency. Krishnan et al. developed the health monitoring and prediction of permanent magnet synchronous motors by creating an intelligent digital twin (i-DT) in MATLAB. They use artificial neural networks and fuzzy logic to map input distances to calculate the remaining lifetime of permanent magnets. There are two methods for health monitoring and prognosis prediction of electric vehicle motors using i-DT [6]. Li et al.’s visual reality health monitoring via flexible electronic devices provides a new avenue for remote wearable medicine. They combined flexible electronics with virtual reality. This could facilitate intelligent remote disease diagnosis through real-time monitoring of physiological signals and remote interactions between patients and doctors. Li et al. briefly reviewed the research progress of flexible medical sensors and virtual reality medical devices. They discussed virtual reality medical devices for telemedicine diagnosis and introduced intelligent remote diagnosis systems and virtual reality devices using flexible wearable medical sensors [7]. Health monitoring is a rapidly developing field for assessing the status of various structures through appropriate data processing and interpretation. Rufai et al. introduce a new technique that optimizes traditional optical fibers for structural health monitoring. It works by microbraiding the optical fiber to improve its mechanical properties and handle it during the manufacturing process. Rufai et al. studied and compared the tensile properties of microbraided fibers and conventional fibers through uniaxial tensile tests [8]. Hoshyarmanesh and Abbasi studied the problem of health monitoring of rotating structures in aerospace. They proposed a monitoring system based on electromechanical impedance spectroscopy of piezoelectric transducers and portable transceivers. To investigate the applicability and preliminary results of the method, Hoshyarmanesh and Abbasi developed a turbomachine prototype and deposited an integrated composite piezoelectric film on the blade [9]. Kaur et al. aimed to develop a general system for damage and retrofit monitoring of reinforced concrete structures using embedded lead zirconate titanate sensors, as well as long-term strength and first stage fatigue monitoring. A concrete vibration sensor is an off-the-shelf sensor. Its unique packaging makes it ideal for embedding in reinforced concrete structures. In addition to cost-effectiveness, concrete vibration sensors offer good structural compatibility and durability. Kaur et al. used a combination of finite element method and experimental research. They established the feasibility of using other higher derivatives of curvature and displacement mode shapes for damage detection and reinforcement evaluation [10]. However, the shortcomings of these studies are that the consideration factors are not comprehensive enough, there is great uncertainty, and the practicality needs to be further investigated.

3. Intelligent Health Monitoring Method

In many cases, the location information of the target is what the user cares about. For some applications, without the location of the target, the information obtained will be meaningless.

3.1. Overall Design of Intelligent Health Monitoring Terminal

3.1.1. Overall Frame Design. A schematic diagram of the composition of the terminal application system is shown in Figure 1. It consists of three parts: an intelligent health monitoring terminal, a medical data processing server, and a mobile client.

3.1.2. Terminal Hardware Framework. The intelligent health monitoring terminal mainly realizes the collection and
monitoring of human health data and displays the collected human health data. At the same time, when the collected data is abnormal, the terminal realizes the alarm. Not only that, it should also make full use of the health data collected by the terminal for data sharing and remote alarming. When an alarm occurs, it is necessary to analyze and process the data, confirm the patient’s condition, and carry out emergency rescue activities if necessary. Therefore, the geographic location data of the monitoring object is particularly important. To sum up, combined with the research status of existing products and analysis of market implementation. However, the wireless signal is easily affected by the environment, which causes the fluctuation of the RSSI value and reduces the positioning accuracy. Therefore, when using the RSSI positioning mechanism, on the one hand, we should pay attention to the phenomenon of occlusion, reflection, or refraction. On the other hand, for the unavoidable situation, the method of improving the algorithm should be used to correct the error [14].

Figure 4 is a schematic diagram of a vital sign monitoring system based on an intelligent terminal.

3.2. Common Algorithms for Moving Target Monitoring. At present, there are three classical moving object segmentation techniques: frame difference method, optical flow method, and background difference method. The frame difference method has low computational complexity and is easy to implement. The disadvantage is that the contour of the moving target cannot be detected completely. An optical flow method can detect moving objects in a video when the camera is moving, but it has high computational complexity and is sensitive to noise. At the same time, the optical flow method cannot accurately detect the complete contour of the moving target. The background difference method is to subtract the corresponding background frame image from the current frame, and the pixels larger than the threshold are considered moving objects. It can detect moving objects fast, accurate, and easy to implement and can also obtain a relatively complete image of moving objects, but it is sensitive to changes in external conditions such as illumination in the scene.

3.2.1. Optical Flow Method. Optical flow is a simple and practical way of expressing image motion. It refers to the instantaneous velocity of pixels in the scene due to motion. It studies the relationship between the change of image gray level in time and the structure and motion of objects in the scene. To use this method, the premise is that the gray gradient changes little; otherwise, it will affect the accuracy of the algorithm [15, 16].

In order to make the performance of the algorithm better, many improved algorithms for the optical flow method also appear. At present, optical flow methods are mainly divided into two types: global optical flow method and local optical flow method. The local optical flow method can represent the edge information of the target well, but it is sensitive to noise. The global optical flow method can obtain the optical flow information in the whole image and has more stable performance than the local optical flow method. It is assumed that \( p(u, v, w) \) is the gray value of a pixel in the image sequence at time \( w \). After the elapsed time \( \Delta w \), the gray value of the point is represented by \( p(u + \Delta u, v + \Delta v, w + \Delta w) \). When the time changes by \( \Delta w \to 0 \), it can be considered that the gray value of the pixel has not changed, that is to say,

\[
p(u + \Delta u, v + \Delta v, w + \Delta w) = p(u, v, w). \tag{1}
\]

If the gray value of the pixel changes slowly with time, then at the point \((u, v, w)\) to \(p(u + \Delta u, v + \Delta v, w + \Delta w)\) with
Taylor series expansion, we can get
\[ p(u, v, w) = p(u, v, w) + \frac{\partial p}{\partial u} \Delta u + \frac{\partial p}{\partial v} \Delta v + \frac{\partial p}{\partial w} \Delta w + \sigma. \]  

In the above formula, \( \sigma \) is the second-order and higher-order infinitesimal value of the Taylor series. When \( \Delta w \to 0 \), the value of \( \sigma \) is zero. After subtracting \( p(u, v, w) \) from both sides of the formula and dividing by \( \Delta w \) at the same time, it can be obtained:

\[ \frac{\partial p}{\partial u} \Delta u + \frac{\partial p}{\partial v} \Delta v + \frac{\partial p}{\partial w} = 0. \]  

\( \Delta u/\Delta p \) and \( \Delta v/\Delta p \) in the formula represent the components of the optical flow vector of the pixel in the \( x \) and \( y \) directions. This makes \( d = \Delta u/\Delta w \) and \( g = \Delta v/\Delta w \); then, the above formula becomes the following form:

\[ \frac{\partial p}{\partial u} d + \frac{\partial p}{\partial v} g + \frac{\partial p}{\partial w} = 0. \]  

Formula (4) is the constraint formula of the optical flow field. Through this formula, the values of \( d \) and \( g \) can be obtained, which is the key to the optical flow method. However, because there are two unknowns in this formula at the same time, there will be countless solutions, so the values of \( d \) and \( g \) cannot be determined [17]. To solve this problem, constraints must be added. There are many ways to add constraints, but in general, there are two categories. One is to add constraints to the optical flow field itself, and the other is to add constraints to the gray field.

Therefore, at least another formula must be found to determine the values of \( d \) and \( g \), which means that new constraints must be found [18]. The following briefly introduces the principles of the Lucas-Kanade method and the Horn-Schunck method:

(1) Lucas-Kanade Method. It is assumed that the optical flow of all points in a small neighborhood \( \theta \) centered on a point is constant, and the corresponding weights are assigned according to the difference of each point. In a small neighborhood \( \theta \), the constraint formula of this method is

\[ \sum_{w \in \theta} S^2(u) [\nabla p(u, w) \cdot x + p(u, w)]^2. \]  

In the above formula, \( S(u) \) is the weight window function, which indicates that the pixels closer to the center point have higher weights. The solution of the above formula can be obtained by the following formula:

\[ B^2S^2Bx = B^wS^2a. \]  

For \( n \) points \( m_i \) at a time \( w \) in neighborhood \( \theta \), where

\[ B = (\nabla p(u_1), \nabla p(u_2), \ldots, \nabla p(u_n))^w, \]
The solution to formula (6) is
\[ x = (B^w S^2 B)^{-1} B^w S^2 a. \]  
\[ \text{(10)} \]

In fact,
\[ B^w S^2 B = \begin{bmatrix} \sum S^2(u)p^2_p(u) & \sum S^2 p_p(u)p_v(u) \\ \sum S^2 p_v(u)p_u(u) & \sum S^2 p_v(u)p_v(u) \end{bmatrix}. \]  
\[ \text{(11)} \]

All sums in the above equations are performed on points in neighborhood \( \theta \) [19].

(2) Horn-Schunck Method. The optical flow field is estimated by assuming that the variation of optical flow is smooth over the entire image. According to the optical flow constraint formula, the optical flow error constraints are
\[ E^2(u, v) = (p_u d + p_v d + p_w)^2. \]  
\[ \text{(12)} \]

For smooth optical flow, the constraints can be described by the square of the gradient of the optical flow field, which can be expressed as follows:
\[ \|\nabla d\|^2 + \|\nabla g\|^2 = (d_u^2 + d_v^2 + g_u^2 + g_v^2). \]  
\[ \text{(13)} \]

In
\[ d_u^2 = \left( \frac{\partial d}{\partial u} \right)^2, \quad d_v^2 = \left( \frac{\partial d}{\partial v} \right)^2, \quad g_u^2 = \left( \frac{\partial g}{\partial u} \right)^2, \quad g_v^2 = \left( \frac{\partial g}{\partial v} \right)^2. \]  
\[ \text{(14)} \]

It can be obtained by integrating both sides of the formula:
\[ Y(u, v)^2 = \int \left( d_u^2 + d_v^2 + g_u^2 + g_v^2 \right) dudv. \]  
\[ \text{(15)} \]

At this time, the optical flow error constraint and the smooth optical flow constraint are combined with the smoothness control parameter \( \alpha \), which is expressed as follows:
\[ E = \int \left[ c^2(u) + \alpha y^2(u) \right] dudv. \]  
\[ \text{(16)} \]

The value of \( \alpha \) indicates the level of smoothness. The larger the smoothness, the higher the accuracy of the estimation. The method proposed is simple to implement, with low computational complexity and intuitive geometric meaning. However, the method also has some shortcomings, and the accuracy and robustness of optical flow are not satisfactory [20].

At present, the optical flow method is an important research content in computer vision and related fields. The detection of moving objects can also be completed without knowing the information in the moving scene, which can be used in scenes where the camera is constantly changing. At the same time, its shortcomings are also obvious. For example, in some cases where the basic constraint formula of optical flow and the conservation of gray level are not satisfied, the optical flow cannot be solved. Moreover, the accuracy of this method is limited, and sometimes, the target is missing. This makes the method have many limitations, and because of its complex algorithm, the calculation is time-consuming. Therefore, it has poor real-time performance and cannot be used in systems that require high detection speed, although researchers have proposed many
3.2.2. Frame Difference Method. The frame difference method is the simplest algorithm in the moving target detection algorithm. It achieves object detection through the difference operation between two and three consecutive frames of images.

The frame difference method is one of the most commonly used moving object detection methods, and it is a pixel-based temporal processing. That is, the moving target area and the background area in the image are divided by subtraction operation between two temporally adjacent frames or three frames of the image sequence. The frame difference method can be simply summarized as follows: it selects two temporally adjacent frame images, subtracts their corresponding pixel values to obtain a difference image, and then performs binarization processing on the image [22, 23]. If the change of the pixel value of the corresponding position does not exceed a certain fixed threshold, it is considered that there is no movement at the position, and it is determined that it belongs to the background area. On the contrary, if the pixel value of the area changes greatly and exceeds a certain threshold, then, these positions are determined as moving target areas, which are considered to be changes caused by the movement of objects in the image. Recording all such regions will locate the region of the moving object in the image. In the frame difference method, since the time interval between two adjacent frames is very small, it has better real-time performance. In addition, the algorithm is very simple and easy to implement. However, the antinoise ability is relatively poor and is easily affected by noise [24]. Figure 5 is a flow chart of the frame difference algorithm.

At present, the frame difference method mainly includes a three-frame difference method and four-frame difference method. The principle is similar. Taking the three-frame difference method as an example, the principle is as follows.

It lets $K_w(u, v)$, $K_{w+1}(u, v)$, and $K_{w+2}(u, v)$ be three consecutive frames of the input video, respectively. When the target is displaced between consecutive frames, because the position of the background image does not change, when the consecutive frame images are subtracted, there is a large difference in the area where the moving object is located. The difference value of the background part is almost 0, so the result of the difference operation between two adjacent frames of images is

$$\Delta K_w(u, v) = |K_{w+1}(u, v) - K_w(u, v)|,$$  \hspace{1cm} (17)

$$\Delta K_{w+1}(u, v) = |K_{w+2}(u, v) - K_{w+1}(u, v)|.$$  \hspace{1cm} (18)

The AND operation is performed on $\Delta K_w(u, v)$ and $\Delta K_{w+1}(u, v)$, and the threshold operation is performed on the result $R_w(u, v)$ after the operation. The threshold is set to $W$, and the obtained image $Q_w(u, v)$ is the binary image of the target, as shown in

$$R_w(u, v) = \Delta K_w(u, v) \times \Delta K_{w+1}(u, v),$$  \hspace{1cm} (19)

$$Q_w(u, v) = \begin{cases} 1, & R_w(u, v) \geq W, \\ 0, & R_w(u, v) < W. \end{cases}$$  \hspace{1cm} (20)

The frame difference method is simple in principle and easy to implement, but it also has certain limitations. There are mainly two aspects: (1) For fast-moving targets, if the time interval is too long, the moving objects in two adjacent frames will have no overlapping area, so they will be detected as two targets. (2) For slow-moving objects, the overlapping area of the images of two adjacent frames is too large, almost equal to the entire moving target, then the difference between the two adjacent frames will be very small, and the moving target will hardly be detected, resulting in missed
Therefore, in general, the frame difference method is not used alone to detect moving objects, but it is combined with other methods to achieve the purpose of improving the detection effect [25].

3.2.3. Background Difference Method. The background difference method is currently the most used moving target detection algorithm. Its principle is similar to that of the frame difference method. But the difference is that it uses the current frame image containing moving objects and the background image without moving objects for subtraction. The main idea is to perform a difference operation between the current frame image and the background image and then record the point with a larger difference as the foreground point. The algorithm is simple to calculate and easy to implement and is more suitable for detecting moving objects in static backgrounds [26]. In the process of using this method to detect objects, background modeling, initialization, and background update are always considered issues. The algorithm is based on background modeling. Therefore, before detecting the target, it is necessary to establish a correct background model and update the model in time. It then subtracts the current frame image and the background image and finally performs binarization and morphological filtering on the difference image obtained after the subtraction process and finally extracts the moving target. Through the previous introduction, it has been known that the frame difference method cannot completely extract the moving target image, but the background difference method can solve this problem very well. When the moving scene is complex or there are factors such as illumination changes and background disturbances in the background, the background modeling and background updating algorithms become particularly important. The algorithm includes image preprocessing, background model establishment, foreground target detection, moving target postprocessing, and background update. Its principle block diagram is shown in Figure 6.

Table 1: Runtime (ms) for software to process 20 s of data.

| Sample          | 1  | 2  | 3  | 4  | 5  |
|-----------------|----|----|----|----|----|
| A (8G memory)   | 86 | 84 | 86 | 75 | 96 |
| B (6G memory)   | 114| 114| 118| 122| 118|
| C (8G memory)   | 78 | 80 | 78 | 85 | 84 |
| D (4G memory)   | 54 | 52 | 54 | 59 | 52 |

Table 2: Response time of web server under the same network environment.

| Mobile network | User login | User registration | Upload file | Record query |
|----------------|------------|-------------------|-------------|--------------|
| 4G             | 0.8 s      | 0.6 s             | 7 s         | 0.9 s        |
| 5G             | 0.6 s      | 0.4 s             | 5 s         | 0.8 s        |
| WIFI           | 0.6 s      | 0.3 s             | 6 s         | 0.8 s        |

Table 3: Stretching training frequency.

| Training action          | Number of groups | Frequency | Hold time (s) | Time interval (s) |
|--------------------------|------------------|-----------|---------------|-------------------|
| Quadriceps stretch       | 3-6              | 3-6       | 6-8           | 6-9               |
| Arm flexor stretch       | 3-6              | 3-6       | 3-6           | 6-9               |
| Straight leg stretching  | 3-6              | 3-6       | 3-6           | 6-9               |
| Swing leg oblique muscle | 3-4              | 10-15     | 0             | 30                |

Table 4: Core strength training frequency.

| Training action          | Number of groups | Frequency | Hold time (s) | Time interval (4s) |
|--------------------------|------------------|-----------|---------------|--------------------|
| Supine up on the ball    | 3                | 20        |               | 35                 |
| Back up on the ball      | 3                | 20        |               | 35                 |
| Bend over the ball       | 3                | 15        |               | 35                 |
| Ball side bridge         | 2                | 2         |               | 35                 |
Figure 8: Changes in athletic performance after rehabilitative physical training.
difference method can be expressed by the following formula:

\[ H_i(u, v) = \begin{cases} 
1, & |C_i(u, v) - O(u, v)| > W, \\
0, & |C_i(u, v) - O(u, v)| \leq W. 
\end{cases} \quad (21) \]

In the above formula, \( W \) is the threshold of image binarization. If the gray value of the differential image is greater than \( W \), it is determined as the foreground; otherwise, it is the background.

4. Experiment of Sports Rehabilitation Training Model under Intelligent Health Monitoring

4.1. Intelligent Monitoring Software Running Speed Test. It organized 5 students to run monitoring software on different Android mobile terminals. It performs filtering and physical parameter calculation on the collected 20-second ECG and respiration data. Through the start and end positions of the algorithm in the program, it, respectively, calls the System.currentTimeMillis() method in the Java class library. This gives the start and end times in milliseconds and subtracts the two to get the program running time. At the same time, the Android mobile terminal uses a USB data cable to connect to the PC, view the Logcat log information on the Eclipse platform, and record the execution time of the program. It takes four different types of mobile phones as A, B, C, and D, respectively. The test results are shown in Table 1.

It can be seen from Table 1 that due to the different memory and performance of the mobile phone terminal, the running time of the software is different. However, the average running time of the software to process 20 seconds of data is about 85 ms, and the occupied mobile phone memory is only 3 M, which meets the real-time requirements of physical sign monitoring.

4.2. Rehabilitation Physical Training in X City Sports Team. It organized 300 athletes to analyze the frequency of reasonably arranged rehabilitation physical training through stretching training and core strength training.

Stretching training refers to the athlete’s warm-up exercise, based on a series of active or passive stretching movements, to achieve stretching the core muscles, joints, and limb muscles of the athlete. Stretching-based training can activate the activity of the athlete’s neuromuscle control system. It improves the athlete’s muscle coordination strength; improves the athlete’s ability to control muscles, nerves, and stability; and ultimately improves the quality of action. It is shown in Table 3.

The core refers to the muscles of the core parts such as the human lumbar spine, pelvis, and hip joints. Core stability training is to train the core part of the person, control the movement of the center of gravity, and transmit the strength of the upper and lower limbs. Human innervation ability, coordination of breathing and movement, and the ability of core muscles to support strength are the main factors affecting the core. It is shown in Table 4.

4.3. Investigation on the Effect of Rehabilitation Physical Training. It can be seen from Figure 8 that 77.0% of the athletes can significantly improve their performance after rehabilitative physical training. 18.7% of the athletes had
basically no change in performance after rehabilitative physical training. 4.3% of athletes experienced reduced performance after rehabilitative physical training. It can be seen that rehabilitative physical training can improve the performance of most athletes. Therefore, attention should be paid to the application of rehabilitative physical training in X city sports teams.

As can be seen from Figure 9, after three rehabilitation physical trainings, it can be found that 92.6% of athletes recovered from sports injury after rehabilitation physical training. 7.4% of athletes have difficulty recovering from sports injuries after rehabilitative physical training. It can be seen that most athletes can recover from sports injuries through rehabilitative physical training.

5. Discussion
With the development of economy and the improvement of people’s material living standards, intelligent health monitoring stations based on information and intelligence have emerged. The development of sensor technology has also provided more accurate health data for intelligent monitoring, enabling people to detect important physiological indicators without leaving home.

Physical exercise is an indispensable and important factor in sports training. Sports training mainly includes psychological skill training and tactical adaptation training. To keep them healthy, we need a new type of medical rehabilitation facility for occupational physical rehabilitation. Combining professional sports training and finding out the root cause of sports injuries can help athletes recover their basic physical fitness and improve their level of physical training.

Generally speaking, physical rehabilitation training mainly refers to athletes improving their health through exercise. After an athlete is injured, a timely diagnosis can be made to properly find out the cause of the problem. It adopts appropriate sports rehabilitation training methods, which can effectively relieve pain during exercise and restore basic exercise ability.

6. Conclusion
In recent years, as athletes face more and more competitions, the competition has become more and more intense, and the incidence of sports injuries has become higher and higher. Sometimes, rehabilitation and physical training are an important part of injury prevention. Through the management of acute injuries, targeted physical training can prevent unnecessary functional decline. It helps athletes deal with injuries, improves performance, and allows athletes to perform at their best.

Physical fitness is an important part of an athlete’s competitive ability and an important manifestation of an athlete’s competitive ability. Physical training is an important part of an athlete’s daily training. With the development of intelligent health monitoring, physical rehabilitation training, as a new training method, has been widely used in sports training. Rehabilitation training can help athletes restore health, treat injuries, prevent recurrence, improve physical fitness, and meet the needs of daily training. Starting from the concept of physical rehabilitation training, this paper analyzes the application of physical rehabilitation training in sports training. It summarizes and analyzes the role of physical rehabilitation training and provides reference for the application of physical rehabilitation training. Sports training introduces the general situation of physical rehabilitation training and discusses the function and value of physical rehabilitation training in sports training.

Data Availability
The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest
The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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