

# Animal Sports Behaviors for the Training of Sprinters

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*Abstract:* Rapid power as a form of power is essential for most sports. It is the key to whether a sprinter can achieve excellent results. Sprint coaches have always attached importance to the study of strength training for sprinters. The traditional concepts and methods of sprint strength training have played a certain role in promoting the training of sprints, but there are still obvious deficiencies and shortcomings. Exercise is a basic feature of animals. Many animals have superior athletic ability. This ability is derived from the animal's fine perception of exercise reaction and precise real-time regulation of exercise behavior. The kangaroo is a representative of the excellent jumping ability in nature and has a strong explosive power. The mechanics research on the kangaroo in the bounce movement has important scientific significance and perfects the knowledge of animal motion mechanics. This paper takes the kinematics analysis of some sprinters' training techniques as the research object. Technical analysis of 158 athletes, in order to better describe the animal sports for athletes' sprint technical reference, the analysis and analysis of the use of sports scores in the form of comparative analysis. With the further development of sports science, the drawbacks of some traditional resistance training began to emerge. The animal movement behavior draws on the introduction of training and the effects achieved in some training practices. Especially in terms of strength improvement. Therefore, in this paper, the article discusses the training of sprinters in combination with animal movement behavior.

# **1. Introduction**

Sprint is one of the earliest competitive projects. It is a physical-oriented, fast-powered, cyclical project. The short distance, high intensity and fast speed make the sprint project the highlight of the track and field meeting. The sprinting movement is also the basis of the track and field sports running, jumping, and casting projects, and it greatly affects the athletic performance of these athletes. Dash is the foundation of many sports. Sprint is a perfect combination of strength and speed, and is loved by people. The definition of animal's motor behavior includes the animal's movement pattern and body posture, which is a reflection of the physiological function and mental

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state of the animal's brain [1]. Animal behavioral research involves two important steps: one is to observe and explain the behavior of an animal, and the other is to explain and explain the function, cause and phylogeny of the behavior in turn. These questions relate to the adaptability of behavior, the underlying mechanisms of motor behavior, and the possible processes of behavioral development during animal evolution [2, 3]. In the study of animal behavior, in addition to observing the natural behavior of animals, it is more important to observe the animal's movement behavior and its changes under certain laboratory conditions, which can be used for sprinters.

The role of each training method in sprinting is specific. There is no omnipotent training method. The effect of any practice means is the unity of specificity and non-specificity. Specificity refers to the primary role of a means. Non-specific refers to the influence that a training method can bring to other qualities [4-6]. Strength training can effectively improve the ability of activities in practice, but other forms of activity cannot be improved simultaneously. The movement of animals in various environments is an important manifestation of their morphology and physiology. Biologists engage in comprehensive observational studies of comparative biology to understand the similarities and differences in movement of animals at different scales, different body shapes, and different living environments. Torres, L. G. A review of animal holistic studies [7]. These include biking to multi-footed walking and running on land, flying in the air, energy storage and exchange mechanisms while swimming underwater. The mechanism of mechanical action during animal movement, such as lateral force, does not promote the animal's advancement, but it increases the stability, flexibility, robustness and environmental adaptability of the animal during exercise. The animal motion control mechanism, multi-modal sensor feedforward and feedback commands form a rapid pre-reaction system.

Antunes, D. Studying the rapid strength of sprints In the general quality of sprinting, strength and speed play the most crucial role [8]. The sprint special fast power is the combination of speed and strength combined with the special nature of strength, showing the comprehensive characteristics of speed and strength in sports. The analysis of the special strength of the sprint mainly focuses on the special strength of the lower limbs, and comprehensively considers the strength of the lower extremities, the short braking time of the thighs and the short lifting of the front swing to enhance the hip joint and the hip joint muscle group. The strength, as well as the strength of the muscles around the knees. Samozino, P study explains the role of sprinter explosive power [9]. Dash is the movement of the human body at the fastest speed in a short period of time. It is a combination of speed and strength, and explosive power is the performance of speed and strength in sports. When the sprinter is running fast, the sports muscle group mainly uses the principle of lengthening-shortening the cycle, so that the muscles first do the centrifugal contraction and then do the centripetal contraction work form. In the actual training process, grasp the training load, the selection of training means, the characteristics of the action structure, and always follow the principle of technical priority, so that the muscle force is in accordance with the requirements of the special competition. Sprint training, such as weight-bearing squat exercises, can add points to the weight-bearing squats, but it should be noted that the squats do not represent the ability to bounce [10-11]. Therefore, according to the athlete's comprehensive level, training stage and special characteristics to choose the appropriate training method, and use the combined training method according to the actual situation to ensure the final exercise results. The multi-functional mechanism of muscle movement in motion, that is, the function of starting, braking, spring, and support during muscle movement. A comprehensive study of animal movements shows how various parts of an animal's body can be combined into a highly efficient exercise system, also showing the interaction of the various parts as an organic whole.

Animal behavior analysis is an important technical tool for advanced central nervous function research, and is not only widely used in traditional fields such as neuropsychology and

neuropharmacology. Parametric description of motor behavior is the basis of behavior analysis. Therefore, establishing an automatic analysis method of animal behavior is of great significance to promote the development of athletes' sports training. This paper takes the kinematics analysis of some sprinters' training techniques as the research object. Technical analysis of 158 athletes, in order to better describe the animal sports for athletes' sprint technical reference, the analysis and analysis of the use of sports scores in the form of comparative analysis. With the further development of sports science, the drawbacks of some traditional resistance training began to emerge. The animal movement behavior draws on the introduction of training and the effects achieved in some training practices, especially in terms of strength improvement. Therefore, in this paper, the article discusses the training of sprinters in combination with animal movement behavior.

# 2. Proposed Method

# 2.1. Means of Sports Training

Sports training means are the methods and measures adopted to achieve a certain purpose. The training means is to solve the problems of athletes in sports quality, technology, tactics and theory, and adopt specific content and methods of oral exercises. Sports training means are the basis of various exercises that play a role in athletes. For example, running, jumping, throwing and throwing instruments and their combination. It is a specific and purposeful way of physical activity and a concrete embodiment of sports training methods. Sports training methods refer to the ways and means adopted by coaches and athletes in order to complete training tasks and achieve the goal of improving the performance of special sports. The complete sprint technique includes four basic parts: starting, accelerating after starting, running in the middle and sprinting. Among them, running in the middle is the most important link, which requires the inertia of the highest running speed to be maintained to the end. In the amateur training at the grass-roots level, we should focus on the connection between starting and accelerating running after starting, the maintenance of the highest speed between accelerating running and running on the way, and the technique of running on the way[12-13].

The theory of modern sprint technology has undergone a qualitative change, from the traditional positive back-kick to the swing-translation movement with the hip joint as the axis, which has changed the swing-push technique to swing-push technique, focusing on the development of the ability of the thigh swing forward and the strength of the surrounding muscles. Pay attention to the flexibility of hip joint and strengthen the muscle strength of hip extensors. Focus on the cultivation of swing landing ability, focusing on grasping the technology of picking up the ground. In the process of high-speed running, the speed of thigh swing is closely related to the hip joint's stretching ability. Traditional sprint training pays attention to back pedal, excessively increases local muscle strength, ignores the connection of the whole running process, and results increase slowly. Modern sprint technology has formed the hip joint as the core of thigh swing technology, which has derived the corresponding specialized exercises. The fast-frequency trot has been transformed into semi-high leg-raising trot, the swing-up leg-raising has been developed into the active down-pressure leg-raising, and the back-pedal has been transformed into the scraping wheel-running. These specialized exercises are more in line with the shorter time. Technical characteristics of special running on the way. Correspondingly, in strength training, it is necessary to coordinate the strength of muscle groups such as hip extension, thigh swing and landing, from single muscle training to overall coordinated development, so that sprint performance can be improved. According to the purpose of training, the effect of training means on specific ability, the value of training activities and the characteristics of the movement structure of training means, sports training means can be divided into four categories. According to the purpose of training, sports training means can be divided into training means of developing physical fitness, training means of improving technology, etc. According to the effect of training means on specific ability, it can be divided into general training means and special training means. According to the application value in training activities, training means can be divided into basic training means and auxiliary training means. According to the characteristics of the movement structure of exercise means, it can be divided into single movement structure training means of periodic and mixed exercises and multiple movement structure training means of fixed and variability exercises.

# **2.2. Special Strength Training**

Sprint is a speed power project, and its power belongs to fast power. In the practice of training, most of the muscles around each joint are first eccentrically contracted, and then work in the form of centripetal contraction, in which elastic energy is stored and released, and the reflex regulation of the nerve is produced. Power is called reaction force, a rapid force produced when muscles are stretched. The special strength of sprint refers to the ability to overcome the resistance generated by the specific muscle group and efficiency control mechanism directly involved in completing the special technical movements of the lower limbs. The components of the sprint special strength include the upper limb swinging force of the shoulder, the braking-swinging force of the hip as the axis, the knee supporting force, the palm-toe and ankle-based centrifugation and super-long contraction.

The upper limb swings the power - the shoulder joint. In the actual sprint, the swing arm at the shoulder joint plays an important role, and its direction and speed play an important role in the overall movement, mainly in the stability of the upper limb and the swing frequency of the lower limb, and there is uniformity between the upper and lower limbs during the sprint. The neural connection. The swinging speed and amplitude of the arm have a significant adjustment effect on the shearing speed and amplitude of the lower limb. If the sprinter does not have a relatively developed upper limb muscle, it will obviously limit the speed of the lower limbs. In foreign sprinters, it can be clearly found that the muscles of the upper limbs are more developed, while the upper limbs of Chinese sprinters are weak links, which shows that the athletes in China are obviously not in the training. In the development of the strength of the upper limb shoulder muscles, it should be noted that the speed and amplitude of the arm swing and the movement structure are as consistent as possible with the special competition of the sprint.

Fast thigh-twisting - brake swing strength - hip joint. In the past sprint technique, the emphasis was on the strength of the squat and the speed and direction of the sprint. Therefore, the training theory was also emphasized in the special strength training of the sprinters. In practice, the excellent sprinter's landing time on the way is extremely short. Research shows that it is almost impossible for athletes to exert the maximum extension force in a short support time. In the study, it was found that the posterior malleolus is a continuation of the swinging motion. In practice, it depends on the strength and speed of the thigh with the hip as the axis. The rapid shearing of the two thighs in the action structure is specifically to extend the hip and bend the hip. The faster the shearing speed, the better the maintenance and improvement of the horizontal speed of the human body.

Low super-long isometric contraction strength - knee joint. During the cushioning and stretching period of the support period, the hip joint is actively hip extension during the whole support period because the hip joint does not participate in the cushioning. Therefore, the cushioning action of the sprint support period is responsible for the two joints of the knee joint and the ankle joint. Completed. When the ground cushion is too small, the cushion angle will be prolonged, and the cushioning time will be adversely affected. Excessive cushioning also affects the degree of force applied to the swinging front swing, which adversely affects the amplitude and speed of the

swinging leg swing. There is no active cushioning and stretching process in the knee joint. The buckling at the grounding is caused by the huge impact force. The knee joint is also a follow-up motion of the hip. The knee joint is obedient. And to serve the movement of the hip, its role is to provide a strong support. Technically, it shows a small cushion and a small stretch of the knee joint. The low support ability of the support leg and knee is expressed in the form of the lower super-equal strength of the knee joint. This is the special strength of the support leg knee. The main features. In strength training, while strengthening the restraint strength exercises of the knee joint, it is also necessary to strengthen the practice of concessive work ability to enhance the knee and squat resistance.

# **2.3. Animal Movement Reaction**

There are two types of sports postures for humans and animals. Most mammals such as humans, dogs, horses, and elephants have a vertical posture, and kangaroos, spiders, and insects are in a flat posture. The flat-lying animal moves more laterally than the vertical animal, so it is more stable and maneuverable during exercise. Regarding the mechanism of action of animal motility, different types of animals have different models of mechanical action with time and space. The synthetic vector of the contact reaction between the running man and the trotting dog passes through the hip (shoulder) of each leg to minimize the moment of action at the joint. In each motion cycle, the brake phase is always immediately after the propulsion phase. When the multi-legged animal walks, the center of gravity of the body is supported on the top of the rigid leg, similar to an inverted pendulum, and the kinetic energy and gravitational potential of the body alternate during a cycle of motion. When the multi-footed animal runs fast, the leg acts like a spring, compressing at the braking phase, and kinetic energy and gravity are stored as elastic potential energy. When the phase is pushed back, the elastic potential is released.



Figure 1. Standing and lying postures

A simple elastomer model can effectively simulate the centroid motion behavior of legged animals in horizontal motion. For quadruped with upright posture on the horizontal surface, the normal force opposite to the gravitational direction is the largest part of the kinematic reaction during the supporting phase, and the forelegs bear more gravity than the hind legs. The forward and backward force (driving force) along the front and back direction of the front leg first decreases and then increases, and the increasing rear leg plays a major driving role. Compared with forward and backward forces and normal forces, although the lateral forces along the left and right directions of the body are much smaller, they are extremely important to the stability of the motion. The forefoot of a creeping quadruped produces braking force only in the direction of movement, while the hind foot provides driving force in the second half. The reaction force of lateral motion points to the midline, which is larger than the forward and backward forces, showing obvious directionality. The driving force for progress is mainly provided by the hind foot, as shown in Figure 2.

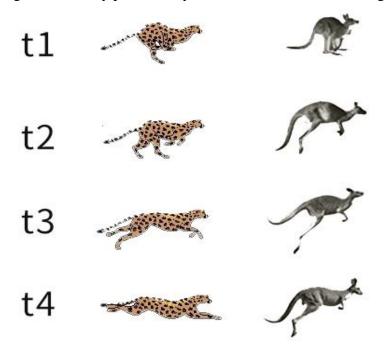


Figure 2. Animal reactionary form

Slopes are one of the most important environmental factors for tetrapods. Compared to running on a horizontal plane, animals' movements on the slope often face a series of challenges, including overcoming the resistance of their own gravity, generating enough impulse to effectively crawl and balance the unstable moments. At present, there are few studies on the motion mechanics of the inclined surface of animals, and mainly focus on the gentle inclined surface (inclination angle <60 °). When the animal crawls on a gentle slope of less than 60 °, the direction of gravity gradually approaches the hind limb as the slope of the slope increases. In this way, the hind limbs must bear more gravity while the forelimbs bear less. As the slope of the slope increases, the resistance to the upward movement also increases, and the forelimb provides more thrust, which causes the forelimb to push more strongly than the hind limb.

# **3. Experiments**

# 3.1. Research Object

This paper takes the kinematics analysis of some sprinters' training techniques as the research object. Technical analysis of 158 athletes, in order to better describe the animal sports for athletes' sprint technical reference, the analysis and analysis of the use of sports scores in the form of comparative analysis. The specifics are shown in Table 1.

Index	One group (experimental group)	Two groups (control group)	t	Р
Height	176.213±3.763	176.332±3.814	-0.043	0.952
Grade	12.321 ±0.231	12.195±0.225	-11.217	0.001**

Table 1. A list of the grouping of subjects' achievements

# **3.2. Research Methods**

In the early stage, I read books on sprint training in the library to form research ideas. Later, in the China Knowledge Network database, the "sprint training", "animal movement behavior learning training", "fast power" and other key words were used to access related papers. Then classify and organize the relevant documents and turn them into the form you need[14-15]. Finally, visit the athletes.

For the experts involved in sports training in this paper, the experts in the field of sports training were interviewed by experts and teachers in the field of track and field. The selection of the means in the experiment, the load arrangement of the training and A detailed conversation was made about the expected problems that occurred. For the determination of the test indicators in the experiment, all the experts and teachers think that it is feasible to ensure the scientificity of the test indicators. Among the interviewees, there were 4 professors in the field of sports training, 8 college track and field teachers with associate professor titles, and 16 first-line track and field coaches, a total of 28 people, as shown in Table 2.

Job title	Professor	Associate Professor	First-line coach
Number of people	4	8	16
Percentage	14.3%	28.6%	57.1%

Table 2. Basic information of interviewing experts

# 3.3. Relevant Factors of Sprint Strength Training

(1) Temporal and spatial characteristics of power load arrangement. The strength of sprinters is explosive. It is very important to increase the muscle strength from zero to the maximum in the process of completing a movement. This explosive force is to exert the maximum muscle force in a short time. We call it the gradient of force, which can be expressed by F/t. This shows that the speed of force growth plays a great role in fast action. Some athletes have high maximum force, but the gradient of force is small. Some athletes have small maximum force, but the gradient of force is large. The speed of force growth varies with the gradient of force. Excellent sprinters spend less than 100 ms in exerting their strength, which is far less than the 300-400 MS required for maximum strength. In this case, athletes are often too late to exert their greatest strength. Therefore, the effectiveness of athletes in fast strength sports depends largely on the force gradient.

(2) The periodic characteristics of power load. For athletes with a certain level of training, their strength training must be combined with the training cycle, and the combination of load and intensity at different stages of the cycle is also different. The periodic arrangement is based on the periodic characteristics of the change of human competitive ability and the appearance of suitable competition conditions. Among them, the latter is the fixed factor determining the cycle time. An important match schedule is usually consistent with the appearance of the most suitable match conditions for a particular event. This requires coaches in strength training according to the amount and intensity of periodic scientific combination load. Moreover, the training cycle and cycle are not

independent, and the load of strength training in a cycle should be increased to a certain extent on the basis of the previous cycle, rather than simply repeating the load of the previous cycle.

(3) Pay attention to the relationship between load stimulation and recovery. Strength training should follow the principle of appropriate load, that is, the arrangement of load should be based on the actual possibilities of athletes and the law of adaptation of human functions, as well as the need to improve athletes'competitive ability to arrange quantity and intensity. In strength training, athletes will inevitably produce certain training effects after enduring certain loads, but whether the load arrangement is scientific or not plays an important role in the quality of training effects. Too little load cannot cause the necessary stress response of the body. Over-loading organisms will have deteriorating reactions. If we do not take timely measures to make athletes'body recover in time, it will cause excessive fatigue, affect athletes' health, and easily cause injury. In strength training, how to arrange the amount and intensity of load is a very important problem, which requires coaches to explore the critical value of load and intensity scientifically in strength training, and to establish a scientific diagnostic system.

# 4. Discussion

The special speed of animal sports is 35m and 65m in the middle, 35m and 65m in the standing, and 35m and 65m in the march are highly correlated with the 100m. In the composition of the 100-meter special strength indicators, standing long jump, fast snatch, standing three-level jump, vertical jump high is the preferred indicator for responding to rapid strength. At the same time, combined with the advice of the expert coach, the final test indicators are the special speed indicator standing 35m, standing 65m. The special strength indicators set a long jump, set a third jump, set a ten jump and a vertical jump. Other special indicators 10 seconds in place to raise the legs and throw the solid ball, and 100 meters of special results. The process of testing the data was divided into three stages before the formal experiment (after 1 week), during the experiment (after 8 weeks), and after the experiment (after 14 weeks). The exercise scores measured before the experiment were divided into experimental group and control group, with 79 people in each group. After 8 weeks of rapid animal movement training, the experimental group tested the scores of various indicators according to strict test standards, conducted mid-term analysis of the experiment, and compared the changes before and after the experiment. The test results are shown in Figure 3.

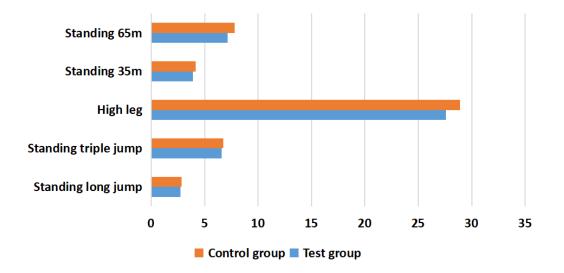


Figure 3. Experimental group mid-term test results

Through the above Figure 3, it can be analyzed that the experimental group has been trained for 8 weeks of rapid animal movement, and the data have been improved. Among the special speed indicators, the measured 35m and 65m interim results were 4.00 and 7.13, respectively, and the paired t-tests were performed in pairs, and the p value was 0.00 < 0.0121. There was a significant difference. Among them, the interim results of the experiment increased by 2.3% and 2.68% respectively. In the special strength index, the average scores of the standing jumps and the vertical jumps are 2.74, 7.01, and 2.76, respectively. Corresponding to the t test, the p value is  $\leq 0.0121$ , and there is a significant difference. The interim results of the experiment increased by 3.3%, 2.6% and 2.6% respectively.

Group	Hip angular average angular velocity	Knee joint average angular velocity	Ankle joint average angular velocity
One group	378.769±9.213 %s	639.785±16.167 %s	126.178±10.687 %s
Two groups	313.216±11.754 %s	619.373 ±22.716 %s	63.213±13.42 %s
Р	0.002**	0.491	0.000**

Table 3. Average angular velocity of the swaying leg on the way

The study in Table 3 shows that the swinging leg lowers the horizontal speed before the foot touches by actively pressing the thigh and then the lower back of the lower leg. The reverse movement of the swing leg in the late swinging direction relative to the moving direction of the body is the foot of the swinging leg. The core of the action. The average angular velocity of hip compression was 378.769±9.213 %, and the second group was 313.216±11.7541 %. The average angular velocity of a group of hip joint depression was greater than that of the two groups and there was significant difference between the groups. The average angular velocity of knee compression in one group was 639.785±16.167 %, and the second group was 619.373±22.716 %. The average angular velocity of a group of knee joints was greater than that of the two groups, and there was a gap between the groups but there was no difference. The average angular velocity of the ankle joint was  $126.178 \pm 10.687$  %, and the two groups were  $63.213 \pm 13.42$  %. One group was larger than the two groups and there was a significant difference between the groups. It is more active to press the ground before the ground. The mean angular velocity of the hip joint was highly negatively correlated with the support time of the animal movement (R=-0.444, P<0.012). The mean angular velocity of the hip joint was negatively correlated with the horizontal speed of the foot (R=-0.305). P < 0.051). It can be seen that the athletes of this age reduce the horizontal speed of the foot through the active depression of the hip joint.

Through the above Figure 4, it can be analyzed that the control group has undergone a period of 8 weeks of animal resistance resistance training, and the data have been improved to some extent, mainly in the following aspects. In the special speed, the standing type 35m is measured. The average scores of 65m are 4.09 and 7.14, respectively. Corresponding to t test, the corresponding p value of standing 35m is 0.02<0.051, and the corresponding p value of standing 65m is 0.068>0.051, which indicates that in the special speed. The standing type 35m was different from that before the experiment, and the standing type 65m was not different from that before the experiment. The results were increased by 0.7% and 1.6% respectively. In the animal strength special strength index, the measured long jump, set the third jump, the average score of the tenth

jump and the vertical jump touch are 2.70, 6.91, 26.37 and 2.69 respectively, corresponding to the t test, the standing long jump, The p-value of the three-level jump and the vertical jump was <0.051, which was different from that before the experiment, and the experimental interim results were increased by 0.7%, 0.8% and 0.7%, respectively. A t-test was performed on the corresponding ten-point jump correspondence, and the p value was 0.068>0.051. There was no difference, but the score was increased by 0.3%.

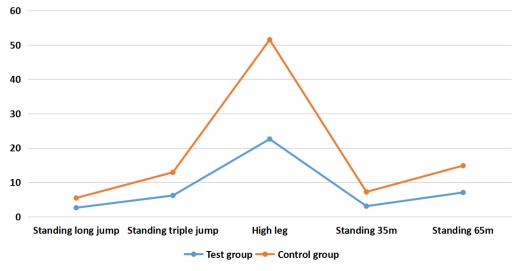


Figure 4. Comparison of exercise strength scores in control animals

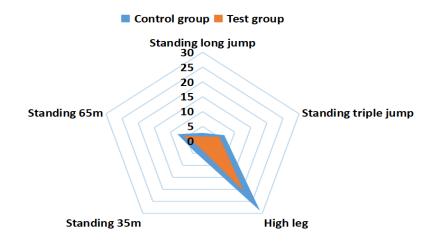


Figure 5. Comparison of test results before and after animal movement before and after the experiment

Through the above Figure 5, it can be analyzed that the experimental group has been trained for 14 weeks of rapid animal movement, and the data have been improved. In the special speed index, the mean values of the standing 35m and 65m scores were 4.12 and 6.91, respectively. Corresponding to the t test, the p value was 0.001 < 0.012, and there was a significant difference. After 14 weeks, the scores increased by 3.7% and 8.22% respectively. In the special strength index, the measured long jump, the third jump, the average of the ten jump and the vertical jump are 2.85, 26.17 and 2.83, respectively, corresponding to the t test, the p value  $\leq 0.012$ , there is significant

Sexual differences, in which 14 weeks later, the special strength scores increased by 7.1%, 9.8%, 5.2% and 5.2% respectively.

#### **5.** Conclusion

Exercise is a basic feature of animals. Many animals have superior athletic ability. This ability is derived from the animal's fine perception of motor reaction and precise real-time regulation of motor behavior. The sprinting movement is an explosive sports program. The animal sports learning training is more in line with the sprint special action mode, and the animal sports learning training is a training method that can effectively improve the explosive power. In this paper, by comparing the speed training of animal sports, we can explore the training methods of lower limb explosive force that meet the characteristics of sprint special sports. The main conclusions are mainly obtained.

(1) Through the research on the athletes' running technology, the reason that affects the speed of the sprint is related to the training factor and has nothing to do with the age. The main difference between the speed of the sprinter's running speed is the support time of the animal movement reference time, in the animal movement. Drawing on the technical aspect, a group of support legs is pressed more quickly under the legs and has better rigidity when cushioning. The swing leg folds more compactly while positively swinging, and the upper limb swings more positively.

(2) After the experiment, the comparison and analysis of the speed strength scores after learning from the animal movement, the control group after a period of 8 weeks of animal resistance resistance training, the data have been improved, mainly in the following aspects, Among the special speeds, the average scores of the standing 35m and 65m are 4.09 and 7.14 respectively, corresponding to the t-test, and the p value of the standing 35m is 0.02<0.051, and the corresponding 65m is obtained. The value is 0.068>0.051, indicating that the standing 35m is different from the pre-experiment in the special speed, and the standing 65m is not different from the pre-experiment.

(3) After the experiment, the comparison of the speed strength scores after learning the animal movements shows that the experimental group has been trained for 14 weeks of rapid animal movement, and the data have been improved. In the special speed index, the mean values of the standing 35m and 65m scores were 4.12 and 6.91, respectively. Corresponding to the t test, the p value was 0.001 < 0.012, and there was a significant difference. After 14 weeks, the scores increased by 3.7% and 8.22% respectively.

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#### **Data Availability**

Data sharing is not applicable to this article as no new data were created or analysed in this study.

#### **Conflict of Interest**

The author states that this article has no conflict of interest.

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