

Research on Training Intensity and Quantity in Track and Field Events Based on State Reflection

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Abstract: With the development of track and field sports, people's understanding of track and field sports is constantly changing. The rational and effective use of state reflection in track and field teaching and training has achieved remarkable teaching results. The improvement of track and field performance and the efficiency of dynamic stereotyping in relatively limited time is the direct reflection of its teaching effect in realizing teaching and training. Based on the state reflection law of people in exercise physiology, this paper analyzes the running, jumping and throwing items in track and field events by means of literature data and analysis methods, and focuses on analyzing the reflection mechanism of state reflection on track and field sports, and the impact of technical actions. Based on the theory of biology, the innovation of Chinese track and field training concept is mainly to adapt the load of the athletes to the training load through the appropriate load intensity stimulation and the extension of the training volume, so as to effectively improve the athletes' competitive level and speed up the healthy development of Chinese track and field training.

1. Introduction

In colleges and universities, the teaching and training hours of track and field events are relatively small. In a relatively short teaching time, it is quite difficult to make students' correct motivation stereotype and improve their sports performance by a large margin [1]. State reflex is a kind of innate reflex activity of human body. The change of head position in space and the change of relative position between head and trunk can reflexively change the tension of body muscles to adjust various postures of the body [2]. At present, with the internationalization of sports, the competition of track and field is becoming increasingly fierce. If we want to occupy a place in the fierce competition, we must change the traditional training concept. In addition, track and field is also the oldest competition in the Olympic Games. It has the characteristics of "speed, endurance, altitude and distance", which reflects the concept of "higher, faster and stronger" in the Olympic Movement [3]. State reflex refers to the regulation and reflex of the tension of the extremities after the cervical vertebrae joints, muscles and nervous system are stimulated by the neck during the rotation or anterior and posterior flexion [4]. For example, when the head is flexed, the trunk is bent and the limbs are tense and straight; when the head is flexed, the trunk is flexed and the limbs are weakened.

State reflection is a reflection that reflexively causes re-adjustment of muscle tension in the limbs due to changes in head posture. The spatial position of the head in the activity and the time sequence of the head movement also have a profound impact on the training of athletics movements [5]. The key to re-examining and locating the traditional concept of Chinese track and field training lies in the grasp of training volume and training intensity. Therefore, it plays an important role in the Olympic Games. When the back type jumps over the squat, the torso of the head is turned into a dorsiflexion posture, and the upper limb is located on the side of the body, and the lower limb is extended downward, which is beneficial to the sputum [6]. This outdated posture coincides with the movement of the limbs when the state reflects the head up, so it promotes the effect of crossing the pole and speeds up the mastery of the technique. Under certain conditions, it can change the tension of body muscles and adjust various postures of the body. In the course of teaching and training of track and field events, state reflection plays a very important role in the formation of movement techniques of track and field events. Especially in the final exertion of throwing events, the

application effect is more obvious.

2. Methodology

In track and field, Orientals have always been at a disadvantage, which is mainly determined by the Oriental constitution. Track and field is mainly the biological adaptation and transformation of human beings. Many of the changes it takes place in the social system, in the blood, in the muscles, and even in the cells. In sprinting, the main wrong head movements from start to sprint are to raise your head after starting, or to observe the starter, which can make the neck and shoulder tense. Through appropriate load intensity and training volume, people are adapted and transformed to promote the outbreak of physical potential, improve their physical quality and coordinate the development of physical health [7]. After the head is tilted back, in order to make the leg effective, at this time, forcefully raise the head (front lift), so that the body that has passed the squat is in a forward flexion position, and the legs will also lift up and bend forward at the same time, which is convenient. this is consistent with the bowing reflex activity, which promotes the effect of leg over-squeezing. At this point, pay attention to tilting the position of the head forward to achieve the front pressure effect of the whole body, and finally prepare for the sprint pressure line action.

In order to more comprehensively and accurately understand the situation of the athletes in the track and field jumping event in China before the competition, the questionnaire survey was conducted on the athletes and coaches of the college students in the National Athletics Championships. The results are shown in Table 1 and Figure 1.

Table 1 Questionnaire results

| Survey respondent | Recovery rate(%) | Efficient(%) |
|-------------------|------------------|--------------|
| Athlete | 99.67 | 98.37 |
| Coach | 99.03 | 100 |

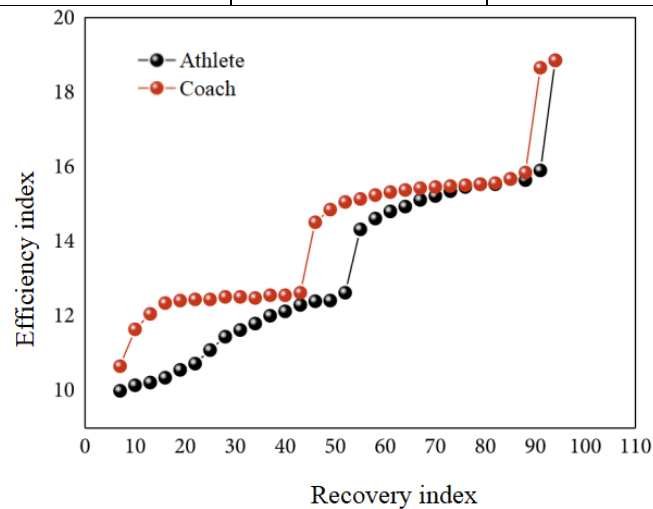


Fig.1. Questionnaire results

The use of state reflection in the forward jump: first is the jump, in this movement, the head should be kept straight, in order to promote the body to maintain integrity. The problem of understanding track and field sports is rather vague. With the continuous development of sports programs, the corresponding training concepts are gradually changing. Most coaches do not understand the training concept of the new situation. Therefore, a training session is practiced and the right one is not right. Well, the coach's experience is really important. Only those high-level coaches with many years of training experience can accurately grasp [8]. At the same time, when controlling the training intensity, we should also have a certain structure of the athletes' training intensity, and combine the usual sports training with the standard of sports examination. In order to ensure effective take-off, the correct part of pelvis should be maintained before take-off, and the body should be tilted back later. Only by raising the head can the correct part of the body and pelvis

be maintained. Athletes' head position can not be raised quickly, but gradually in the whole movement link. This requirement can keep the body in a forward state at all times, and ultimately facilitate the exercise frequency of the lower limbs.

The application of state reflex in throwing teaching and training is mainly reflected in the head position in the final exertion. At this stage, the head should be raised in order to form a chest-raising movement, while forming a good "back bow" state. In traditional track and field training, the principle of high training volume and low training intensity is generally followed. With the continuous application of this training method, the expected results have not been achieved in track and field competitions. From this, we can see that this training method is wrong, and even has some adverse effects. The problems that arise in the track and field team must be resolved immediately, and all aspects of the conditions must be guaranteed in a timely manner. Therefore, we must reasonably grasp the intensity of training and training in track and field teaching, and insist on establishing high-intensity training on a reasonable amount of training. This can make the buffering time longer, fully achieve the concessional contraction, and the swinging leg can also obtain sufficient swing time, thus receiving a good take-off effect. In the series of efforts to correct the mistakes, the incorrect posture of the head and neck muscles can be corrected by means of in-situ swinging exercises, smiling running, and relaxing running for the incorrect head posture during running.

3. Result Analysis and Discussion

In the sprinting exercise, the distance and time at which the athlete completes the exercise indicates the amount of training, and the speed at which the exercise is completed indicates the intensity of the training. The change and degree of emphasis on the training volume and training intensity will directly affect the training effect. The modern middle-distance running technique requires the athlete to run reasonably and effortlessly, that is to say, in the case of maintaining a high speed running, the body energy is consumed as little as possible, thereby obtaining better results. To get a good grade, you must strengthen your team's cooperation. Therefore, in track and field sports, we must strengthen the management of management departments and take effective measures. In this process, the training intensity slowly goes up. When the amount of training decreases, the intensity of training will continue to improve, and the amount of training will be reduced to a relatively small amount in the competition period. Of course, we should also pay attention to strengthening special training for students and do everything possible to improve their willpower, explosive force and speed. When the body reaches the top of the rod, the head immediately rotates around the rod, which enables the body to rotate around the rod with the reflex activity of the body, thus enhancing the effect of crossing the rod.

The application analysis of state reflex in long jump teaching and training needs to study and analyze the head posture of takeoff, and correct the incorrect head posture in time, at the same time, it also needs to sort out the relevant correction methods. The greater the intensity of training, the more intense the tension caused by the athletes' central nervous system and psychological state. From the advanced middle and long distance running techniques of high frequency running in recent years, elite athletes and coaches pay more attention to the technical factors of slightly increasing the forward tilt of upper body and natural relaxation of head and neck in order to maintain high frequency and save physical fitness. The athlete's physical fitness has always been under high-speed operation. Therefore, if the usual training intensity is insufficient, the tension can not be felt in the competition, and the athlete's training quality and special skills cannot be exerted. The law of biological adaptability determines the basic requirements of our training process. Arranging training according to the rules or not practicing according to the rules will produce two opposite results. This requires the trainer to have both good physical fitness and solid basic skills, as well as to have a good psychological quality. Only by satisfying these conditions can the training intensity and training volume be better adjusted.

The length of time before the game is reduced by the jumper athletes is mainly determined by the characteristics of the athletes' special items and whether the athletes are in the best competitive state.

Most coaches have different opinions on the time determination of athletes' pre-competition weight reduction training. The time chosen is relatively wide, messy and discrete. Figure 2 below is a time analysis of pre-competition distance reduction training for jumpers in track and field events.

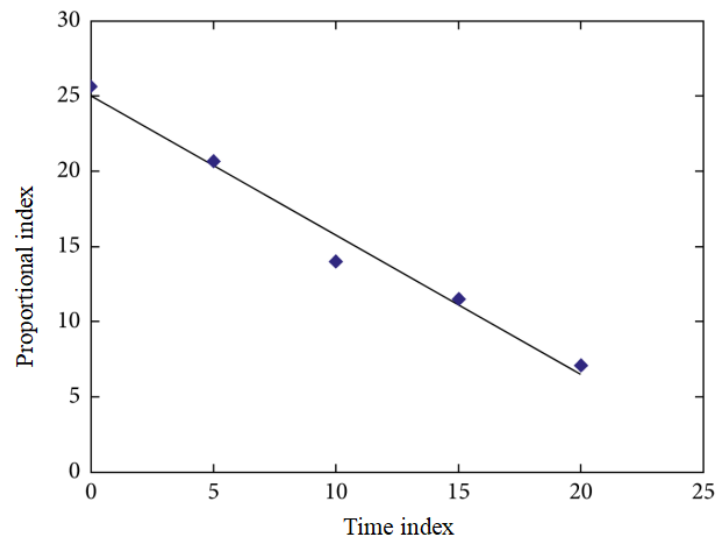


Fig.2. Time analysis of athletes' track-down training distance competition in track and field jumping events

State reflexes should correct the incorrect posture in time for the teaching and training of the long jump, and minimize the error. It also has the necessity of direct reality. Due to differences in levels between athletes, the same sports are often performed with different training intensities. Coaches must use different training methods in training to meet the training needs of different athletes. Of course, this single teaching method is not completely in line with the laws of physical education. It must also be combined with other teaching methods. For example, combining basic skills in teaching may achieve the effect and purpose of doing more with less. In the competition, we can't get good results. Short-term intensity training before competition can not make athletes adapt to the high intensity of sports. Only after repeated stimulation can a relatively sTable intensity be formed. Only long-term training can be carried out. In teaching and training, we should first observe whether the head movement is correct and whether it conforms to the reflex mechanism when observing and correcting the movement, and then observe from other directions, then we will get good teaching and training results.

4. Conclusions

In short, in track and field sports, although the use of traditional training concepts has achieved good results, but compared with the world's high-level countries, there are still some gaps, such gaps are mainly manifested in the concept of training. To a certain extent, the level of track and field sports determines the level of a region or a country. In order to gain competitive advantage in track and field sports and promote the development of track and field sports, China now adopts many advanced technology and scientific concepts to guide it in the process of track and field training. Reasonable and efficient application of state reflection can adjust the head posture in the whole process of teaching and training of track and field events, and reasonable head posture can positively promote the smooth completion of technical actions of track and field events. Increasing the training intensity based on maintaining the relative training amount is the main operation mode in modern track and field sports training. It can break through the training bottleneck in traditional track and field sports and improve the athletes' sports level, thus better promoting the development of China's track and field sports.

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