

# Research on Technical Characteristics and Special Strength Training of Sports Dance Based on Value Perspective

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**Abstract:** Sports dance is a skill performance sport with technology as the core and strength quality as the guarantee. The combination of sports dance and aesthetics is multi-angle and multi-level. The essence of sports dance is fully displayed in the process of embodying beauty. In sports dance, to grasp the change of rhythm and continuity of movements requires sports dancers to have strong comprehensive sports qualities, of which the most important is special strength. Good strength quality can not only avoid the injuries of dancers in sports and prolong their sports life, but also promote dancers to learn faster, master correct dance techniques and give full play to their technical level in the competition. Based on the value perspective, this paper analyses the technical characteristics of sports dance, summarizes the training methods, means and principles of dance players' special strength.

## 1. Introduction

Sports dance is a highly artistic and skillful sport. Male and female athletes with skilled skills, highly coordinated tacit cooperation. In sports dance, to grasp the change of rhythm and continuity of movements requires sports dancers to have strong comprehensive sports qualities, of which the most important is special strength [1]. Sports dance is a skill performance sport with technology as the core and strength quality as the guarantee. Developing strength quality is the basis for improving athletes' competitive ability and creating excellent sports results. In order to make this event more competitive in international competitions, it is necessary to deeply study the internal mechanism of the formation of this event's sports technology and grasp its technical characteristics and sports training rules [2]. Different kinds of dances, the beauty of performance is not the same, but it is undeniable that sports dance and aesthetics are inseparable. The aesthetics embodied in sports dance and the need for her aesthetics are bound to raise the status of sports dance to a certain artistic level, becoming a fashionable, elegant and beautiful sports [3]. Special strength is the basis of special speed, so special strength training plays an important role in sports dance training.

The quality of strength is the guarantee of the physical fitness construction of sports dance athletes. It is the material basis for the beautiful completion of complete sets of movements, and it is the core quality of sports dancers' various physical qualities [4]. It is necessary to make the complete set of movements with varied rhythm and various movements complete and smooth, which requires athletes to have good comprehensive sports quality [5]. For the sports dance with human motion as the main means, it displays various vivid images through various human movements, showing people's health beauty, power beauty, youth beauty and body beauty [6]. Good strength quality can not only prevent dancers from being injured in sports and prolong their sports life, but also promote dancers to learn faster, master correct dance skills and give full play to their technical level in competitions [7]. In sports dance training, according to the technical characteristics of dance, it is particularly important to strengthen the corresponding strength training. Based on the perspective of value, this paper analyzes the technical characteristics of sports dance events, and summarizes the training methods and methods of dancers' special strength and the principles that should be followed in training.

## 2. Sports Technical Characteristics of Sports Dance

In sports dance, each athlete needs to control the muscles and stretch the limbs so as to achieve each dance movement. A person who takes part in sports dance exercises for a long time has relatively developed myocardium, and the output of each stroke increases. All body tissues can get sufficient blood supply and have the best metabolic state. The completion of each set of dance movements requires athletes to coordinate each part of the body reasonably, and these parts can move flexibly to maintain the balance of the body. If the dancer's muscle strength is not enough in all parts of the body, there is not enough ability to control all parts of the body [8]. According to the different characteristics of sports techniques and the strength qualities needed to complete various dance movements in sports dancing events, if the dancers want to have the ability to further learn and master all kinds of superb movement techniques, they must have the strength qualities needed for special purposes.

Strength is expressed in the degree of muscle tension. Its size depends on the physiological cross-section of muscle, the degree of action of nerve center controlling muscle contraction, the biochemical process of muscle tissue and the technique of completing movement. With special strength as the foundation, it will be easy to complete difficult movements in the whole dance display process. According to the changing trend of flexion angle and muscle force of sports dancers, the changes of three-dimensional motion angle and muscle force of knee joint in each analysis step are applied to the finite element model as boundary conditions. The motion angle parameters applied to the finite element model are shown in Figure 1.

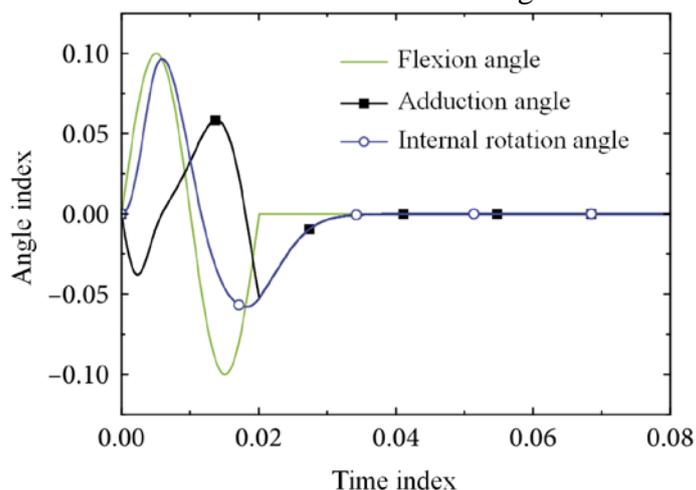


Fig.1. Motion angle data applied to the finite element model

Due to the differences in the movement structure and completion form of sports dance, the required muscle strength is also different. Sports dance is not a one-person performance, but an art of cooperation between two or more people, which needs to be completed in coordination with partners or teams. Under the condition that the skill level of each player is getting closer and closer, it is better to adapt to the needs of the continuous development of sports dance technology and improve the competitive performance of the players. Twist and swing technology puts forward higher requirements for sports dancers. Sports dancing requires athletes to train their muscle strength and can accurately grasp the muscle strength, especially the hip and waist muscle strength [9]. Competitors must constantly improve the technical difficulty, which puts forward higher requirements for strength training. Competitors must strengthen strength quality training and improve strength quality. The strong, slender and steady physique of male athletes and the symmetrical and graceful shape of female athletes result in the difference and coordination between masculinity and femininity. Only with good strength and quality, can athletes quicken the speed of action, complete the action of technical action more perfectly, improve the quality of technical action, and strive for good results in the competition.

### 3. Special Strength Training of Sports Dance

#### 3.1. To improve athletes' ability to complete various movements

According to the sports technical characteristics of sports dance events and the different characteristics of the strength required to complete dance movements, dancers must have certain physical control strength, dynamic fast strength and strength endurance if they want to learn and master superb sports technology. Every movement of sports dance should be completed according to its specific strength [10]. The magnitude of force is determined by the nature, structure, amplitude and expected effect of its movements. Special strength is the ability of dancers to reserve through repeated practice of basic movements. Special strength is best obtained through repeated practice of basic movements of sports dance, that is, strength is practiced while basic skills are practiced. In the process of training, make muscle form memory, improve special ability, achieve the results of training. Through special training, the corresponding special working ability and special energy reserve of muscles are improved, thus improving the special ability. Different kinds of dances have a set of clothing system belonging to this kind of dance. Sports dance also has strict requirements on clothing. In order to learn sports dance, it is necessary to spend a lot of time practicing special physique, special strength quality and basic movement skills, so as to lay a good foundation for further improvement of skills.

The body shape of modern sports dancers is developing towards diversification, and athletes with different body shapes can find their own positions on the sports dance floor. Through comparison, it is found that the calculated values of brachial muscle, brachioradialis muscle, triceps brachii muscle and elbow muscle are within the range of anatomical results, while the value of biceps brachii muscle is obviously larger than the anatomical results. The calculation results of physiological transverse area are shown in Table 1.

Table 1 Calculation results of physiological lateral area

| Muscle name                         | Calculated value |
|-------------------------------------|------------------|
| Long head of biceps brachii         | 4.55             |
| Short head of biceps brachii        | 5.32             |
| Long head of triceps brachii muscle | 4.46             |
| Lateral muscle of triceps brachii   | 3.59             |
| Medial brachial triceps muscle      | 4.68             |

#### 3.2. Improving the quality and skills of completing movements

The vast majority of movements are accomplished through leg support and strength. Leg strength exercises must be carried out in a way of low load, fast speed and few repetitions. The control force of the body is the static contraction of the muscles, which has a fixed effect on each link of the limbs. This not only ensures the stability and balance of the dancer's body while dancing, but also ensures the relative stability and overall aesthetic feeling of the male and female partners when they cooperate with each other. The artistry of sports dance movements needs to be reflected by extremely large movements, and the movement range not only needs muscle strength, but also depends on muscle flexibility and joint flexibility. Any exercise in special strength training requires correct posture and standardized movements. The main purpose of the development of special strength quality is to serve the mastery of athletes' special skills. Each strength training method has obvious pertinence in its attribute and development position. On the premise that the physical quality of sports dancers meets the standards, proper weight control is helpful for sports dancers to increase their endurance.

### 4. Conclusions

The combination of sports dance and aesthetics is multi-angle and multi-level, and its essence is fully displayed in the process of embodying beauty. Sports dance can not only bring health to people physically and pleasure to people mentally, but also bring aesthetic enjoyment to people

visually. Strength quality is the core quality of all physical qualities of sports dancers. Good strength quality can not only prevent dancers from being injured in sports and prolong their sports life, but also promote dancers to learn faster, master correct dance skills and give full play to their technical level in competitions. We should pay more attention to the special strength training of dancers, and we need to seriously sum up our experience and lessons in training and competition in the past, and constantly understand the movement law of this project. The training of special strength should be based on the athletes'age, physical condition, training level and other specific conditions to determine the amount of training, pay attention to the feasibility and effectiveness of training means. In the process of relative strength training, if the training intensity is too high, it will cause the pressure of the central nervous system, and then affect the athletes'psychological quality. With the improvement of students'Dance Level in different semesters, the focus and emphasis of special training should be adjusted.

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