

Research on the Flexibility Training in Gymnastics Teaching in colleges and universities

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ABSTRACT. *Gymnastics is a sport with high ornamental value in large-scale sports events. The establishment of gymnastics courses in colleges and universities can promote the healthy development of college students. The flexibility training is one of the physical quality training contents in the gymnastics teaching. In the teaching of gymnastics in colleges and universities, strengthening the training of athletes' flexibility is an inevitable requirement to improve the athletes' level of gymnastics and an important measure to reduce the probability of athletes' sports injury. This paper first briefly describes the characteristics of gymnastics, and then puts forward the key points and practice of flexibility training in gymnastics teaching in colleges and universities.*

KEYWORDS: *Colleges and universities; Gymnastics teaching; Physical training; Flexibility*

1. Introduction

The gymnastics teaching contents in colleges and universities mainly include basic gymnastics, apparatus gymnastics and skillful sports, etc[1]. Among them, the basic gymnastics includes the free hand gymnastics, the queue formation and so on; apparatus gymnastics includes horizontal bar, parallel bars and horse vaulting, etc; skillful sports includes the roll motion, the head flip, the somersault and the balance movement and so on, each gymnastics content can be subdivided again. The above teaching contents require athletes to have good flexibility. This paper takes the single movement teaching in free hand gymnastics as an example, the single movements are lifting, putting, flexing, stretching, coiling, rotating, squatting, jumping and kicking and so on. Among them, some movements require athletes to participate in the completion with more than two body parts, some require athletes to participate in the completion with many body parts, and some movements require athletes to participate in the completion with all parts of the body. Whether the movements are simple or complex, they all require good flexibility. Only the athlete has good flexibility quality, he or she can complete the single movements smoothly and naturally, like that the movement could be beautiful.

2. Key Points of Flexibility Training in Gymnastics Teaching in Colleges and Universities

Flexibility enables the body's joints to move and stretch in different directions as well as soft tissues such as muscles and ligaments [2]. It can be seen that the athletes' flexibility is closely related to the range of their joints motion and the ductility of their muscles, ligaments and other soft tissues. According to the characteristics of gymnastics, the coach should strengthen the training of flexibility. In the process of training, the coach needs to grasp the following points.

2.1 Combine the Flexibility Training with Strength Training

Gymnastics requires athletes to have a good strength quality, especially the strength of upper limb, waist-abdomen and lower limb. The movements of lifting, putting, stretching and coiling in gymnastics not only have certain requirements on the flexibility of the athletes, but also on the strength of the athletes. Therefore, in the process of flexibility training, the coach should let the athletes pay attention to the combination of flexibility training and strength training. During the training, the coach should catch the two problems: one is to pay attention to the relaxation exercise after the strength training; the second is to pay attention to the elastic relaxation activities after flexibility training, it can be seen that "relaxation" is very important in the combination of flexibility and strength.

2.2 Arrange the Content of Flexibility Training According to the Category of Gymnastics

There are a variety of gymnastics events, and each requires good flexibility, however, different gymnastics events also have different requirements for flexibility. The coach should not train all gymnasts in the same training content and method, but should train according to the specific requirements of the gymnastics they have learned.

2.3 Moderate Intensity

The reinforcement of flexibility training should be of moderate intensity, excessive intensity can easily lead to injuries on joint, muscle and ligament during training, if the intensity is too small, it is difficult to meet the basic requirements of flexibility training [3]. Before training, teachers can get a preliminary understanding of the athletes' flexibility according to some flexibility tests, and then make training plans based on this. During the training, the coach observed the athletes' reaction to the intensity of the training and recorded it. After the training, the coach should test

the flexibility of the athletes again and observe the physical and psychological conditions of the athletes, so as to find problems and modify the training plan in time.

2.4 Step by Step and Be Persistent

College gymnasts are not professional gymnasts, they have great differences in physical quality, the foundation of gymnastic sports, training environment and diet conditions and so on. The coach should make the athletes clear that flexibility training is a gradual process, not a rush. The coach also should let the athlete strictly carry on the training and lay a good foundation according to the established training plan, especially in the beginning of the training. At the same time, during the training period, the coach should cultivate the character of the athletes to train hard.

2.5 Take Care to Prevent Sports Injuries

Flexibility training has a great impact on athletes' joints, muscles and ligaments. If the athletes do not do warm-up exercises before training, while artificially increasing training volume or the damage of training equipment will lead to sports injuries[4]. Therefore, the coach should strengthen the sports safety education to the players, sports teams should have special medical personnel so that they can deal with athletes' sports injuries timely.

3. The Practice of Flexibility Training in Gymnastics Teaching in Colleges and Universities

3.1 Common Training Methods

The methods of flexibility training in gymnastics teaching mainly include the training on dynamic flexibility, static flexibility and stretching muscle and connective tissue.

Static flexibility training include active exercises and passive exercises. Active static flexibility exercises are exercises in which the athlete continuously exerts tension on the muscles and gradually increases the range of movements while maintaining the largest range of joints, such as standing still in a bridge. Passive static flexibility exercises allow athletes to maintain a fixed posture with the help of external forces, such as rib flexion to embrace leg.

Dynamic flexibility training are also divided into active exercises and passive exercises. Active dynamic flexibility exercises enable the athletes to do flexibility training in the process of movement, such as pulling shoulders and kicking. Passive dynamic flexibility exercises let the athletes gradually increase the range of exercise with the aid of external forces, such as rib flexion to press leg.

Training of stretching muscle and connective tissue is a typical pull training method, it includes fast pull and slow pull. Fast pull requires athletes to stretch the muscles and ligaments to a certain extent in a short time, it is explosive, and if there is not enough warm-up exercise, muscle or ligament may be damaged [5]. Slow pull requires the athlete to slowly stretch the muscles and ligaments to a certain extent, due to the slower pulling speed, it is not easy to cause muscle or ligament damage. College gymnasts have a great difference on physical quality and gymnastics basics with professional gymnasts, so the coach should try to let the athletes slowly pull.

3.2 Training Methods for Different Body Parts

Shoulder flexibility training: press shoulders, vibrate shoulders and rotate shoulders, etc.

Waist flexibility training: back bend and stretch waist, etc.

Wrist flexibility training: stand upside down against the wall and move the push-ups back and forth, etc.

Hip joint flexibility training: the rod leg press (front press, side press and back press), kick, move leg, control leg, swing leg outward and inside crescent leg, etc.

Knee joint flexibility training: upper body half squat against the wall, flex and stretch knee joint while bearing load, run-up and take-off flexion and extension, etc.

Ankle flexibility training: hook ankle while sitting, rotate ankle joint and press instep, etc.

4. Conclusion

Flexibility quality training is an important part of physical quality training in gymnastics teaching in colleges and universities. When the coach trains the athletes, the training plan should be made according to the athlete's physical condition, item type and training condition. During the training, the coach should step by step to prevent athletes from sports injuries.

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