

Influence of Swiss Ball Training on Mobile Quality of Volleyball Beginners

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Abstract: At present, the training method of using Swiss ball for the core strength training is being more and more used in the quality training of Chinese athletes, and it is considered by coaches and athletes to play a positive role in improving the core strength, maintaining the stability of the center of gravity, maintaining physical balance and coordination. Scholars at home and abroad are also particularly concerned about this. The Swiss ball training is added into the traditional training, so that the traditional strength training means are more rich.

Keywords: Swiss ball; Core power; Volleyball

Many techniques in volleyball are completed in an unstable state, and the coordinated force under unstable conditions is the key to the successful use of technology! Volleyball, as one of the three major balls, has long been developed and popularized in various parts of our country. In order to promote the development of volleyball to the first place of sports events, the physical quality of the volleyball players has a relatively high requirements, in the volleyball competition, the physical quality of the players is the primary condition of the competition. In the course of the game, the direction of volleyball is that because of different players, the ball will also appear irregular movement track. The defensive player should move to the position where the ball falls according to the track of the opposite ball. Core strength training is a training method to improve the movement speed of athletes, so the core strength training plays an important role in the development of volleyball.

This paper aims to study the study of Swiss ball core practice in mobile quality, find out the advantages and disadvantages of Swiss ball core practice compared with traditional core practice, and provide volleyball teachers and students with suggestions and methods for better quality training.

1. The application of core strength training in volleyball

The Swiss Ball started out as a toy, and was later used in rehabilitation treatment. Nowadays, the Swiss ball is widely used in sports training. Many experiments have proved that the application of Swiss ball training can improve the stability and coordination of the core of the body and prevent sports injury.

The power source of human movement is the core force, which is the ability to stabilize the center of gravity, maintain the balance and coordination of the body, and give the strength to the upper and lower limbs. The “core” is the middle link of the human body, which is located under the shoulder joint, including the pelvis above the hip joint, which is composed of the waist, the pelvis and the hip joint. According to the research of different scholars, with the core as the core. Foreign scholars believe that the core part includes the spine, abdomen, hip joint and near, and lower limbs of the deep muscles and surrounding connective tissue and other parts. Core strength training refers to the training of the strength, stability and balance of the core muscles and their deep and small muscle groups, to provide a fulcrum to act on the human body and other strength.

Core strength training has been more studied so far. Researchers have carried out a lot of theoretical research on the definition and value efficacy of core strength training, and conducted a lot of practical research by applying core strength training to different sports projects. The role and value of core strength training have been verified and enriched. The author of the core strength training in the volleyball project induction and summary, found that the core strength of the volleyball players balance ability, stability ability, jumping ability, air ability, swing speed, technology, and effective transfer of power has a very important role, the researchers through the experiment of the ability of the experiment, got good theoretical and practical results. However, the author found that no research results have verified the effect of core strength training on the movement ability of volleyball players, and movement is a basic no-ball technique in volleyball. It plays a very important role in the play of the ball skills and the use of tactics. Therefore, the author intends to verify the role of core strength training on the mobility ability of volleyball players through experimental research. At the same time, the core strength training improves the stability and balance of volleyball players, so as to provide a good theoretical and practical basis for the physical fitness and technical training of volleyball players.

2. Experimental content and evaluation methods

Twenty students in volleyball physical education were selected as subjects, 10 students from experimental group and control group, and the experimental results of these 20 students were determined as research subjects.

2.1 Training content and training load

Train the 20 students for 5 weeks with the Swiss ball, as follows:

Phase 1 (Week 1-3)

Training content of the control group	Training content of the test group
Preparation part (30min) Monday: 1. 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Monday: Jogging for 10 laps on the volleyball court 2. Kneeling up. Lie on your back. 4. Support your feet with one lateral elbow. 5. Stand still against the wall.
Preparation part (30min) Monday: 1. Jogging for 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Wednesday: Jogging for 10 laps on the volleyball court 2. Lie your stomach and bend your knees. Lie on your hip bridge. Side, one-hand and two-foot support. 5. Stand still against the wall.
Preparation part (30min) Monday: 1. Jogging for 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Friday: Jogging for 10 laps on the volleyball court 2. The birds birds both up. Lie on your legs in circles. Lateral one elbow / one hand and one foot support. 5. Stand still against the wall

Phase 2 (Week 4-5)

Training content of the control group	Training content of the test group
Preparation part (30min) Monday: 1. 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Monday: 1. Jogging for 10 laps on the volleyball court 2. The Swiss ball has many sit-ups. 2. Swiss ball back muscle practice. 3. Swiss spherical side muscle exercises. 5. The Swiss ball stands still against the wall.
Preparation part (30min) Monday: 1. Jogging for 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Wednesday: 1. Jogging for 10 laps on the volleyball court 2. The Swiss ball has many sit-ups. 2. Swiss ball back muscle practice. 3. Swiss bulbar side muscle exercises. 5. The Swiss ball stands still against the wall.
Preparation part (30min) Monday: 1. Jogging for 10 laps on the volleyball court 2. Regular strength training	Preparation part (30min) Friday: 1. 10 laps on the volleyball court 2. The Swiss ball has its sit-ups. 3. Swiss ball back muscle practice. 4. Swiss spherical side muscle exercises. 5. The Swiss ball stands still against the wall.

2.2 Evaluation method

According to the “Chinese youth volleyball training syllabus” opinions, the standing long jump, run high, 30 meter run, half “meter” word moving four indicators test, as the main indicators to measure the special quality of volleyball in China. In this paper, the test results of these four indicators can analyze the influence of transverse explosive force, longitudinal explosive force, linear movement ability and multiple mobility ability respectively.

The evaluation method mainly adopts four test methods: standing long jump, auxiliary running touch height, 30 meter running and half “meter” movement, respectively, once before the start of the first week and once after the end of the eighth week. Before each test, ask 20 subjects to fully warm up, warm up and run, and stretch, and then carry out the four tests.

2.1.1 Standing long jump

Test objective: Test the lateral burst force in this paper.

Test route: Draw the jumper line clearly.

Test method: subjects standing after the jumper line, feet can

not cross the line, feet jump at the same time, do not jump.

Measure the vertical distance between the rear edge of the postlanding foot and the jumper line.

2.1.2 Run-up and touch high

Test objective: Test the longitudinal explosive force in this paper.

Test method: the subject runs 2~3 steps, both feet jump, after jumping out one arm to touch the height or ruler, the highest point can touch the finger is to run the high score. Each person was tested twice to record the best score.

3. Conclusion

By using the core strength training of the Swiss ball method is the Swiss ball as a medium, with the ball support, ground support, slow dynamic or static motion. Its purpose is to increase stability, develop the deep muscle strength in the core area, and change the weak muscle strength in the core area. After using the Swiss ball training, the standing long jump and touch scores of the experimental group improved significantly. After the conventional physical training, the standing long jump and scores of the control group were less than that of the experimental group. We can know this from the experiments in the experimental group and the control groups. Compared with conventional teaching methods, core strength training means play a greater role in teaching. More conducive to improving the performance.

The Swiss ball has some problems of instability. Using the Swiss ball practice, can fully stimulate the muscles of all parts of the body, especially the core parts, so that the body maintains balance and stability. The training of using Swiss ball increases the difficulty of training and thus becomes challenging. In addition, the core training of using Swiss ball also has some interesting experience, which can improve the initiative and enthusiasm of athletes in the training. So as to achieve the purpose of relieving the players’ psychological and physical fatigue. Reduce the probability of motor injury.

References:

[1] Li Yongming; Yu Hongjun; Zi Wei; Cao Chunmei; Chen Xiaoping; on the core strength and the origin of the —— for training in competitive sports. question. develop [J]. Sports Science, 2008 (04): 19-29

[2] Zhang Rui. Rational interpretation of core strength training —— new Angle of scientific training [J]. Journal of Nanjing University of Physical Education: Social Science Edition, 2010,24 (4): 120-123