

The Research on Core Strength Training in PE Teaching-taking the Boys' Class for Example

Yuning BO

The Department of Physical Training of Tianjin University of Finance & Economics

ABSTRACT: The literature review found that the core strength of the studies focus on sports training, and is applied to university teaching and research in fitness is relatively small Physical Education is the key to promoting core strength training and platform, core strength training for improving physical and mental quality of the college boys have a remarkable success, in college physical education to sustain the effective implementation of core strength training. The research method of this paper uses the methods of literature, comparison, practice, through the stages of training, to achieve the core strength training purposes, and to make the students have more significant improvement in physical fitness training.

KEYWORD: core strength; physical education; fitness

1 PREFACE

Several generations of Physical Education's efforts to explore and sports workers in reform and innovation of their teaching philosophy from the relatively simple development of the traditional teaching to the diverse and rich thoughts of teaching philosophy. In recent years, core strength training exercises from the field of professional sports is increasingly integrated into the college physical education to their new practice methods, professional training philosophy, not only to mobilize the enthusiasm of students to learn and practice sports passion degrees

From the past to the present, from the students' passive acceptance to the present's initiative in learning, and being consciously going into physical training, experiencing and enjoying the fun of sports, which not only can effectively improve their physical and mental quality, but also can prevent injury.

2 THE MEANING OF THE CORE PARTS OF THE CORE CONTENT AND THE ROLE OF STRENGTH TRAINING

2.1 *The meaning of the core parts*

Core strength is the core part of the body (specifically, less shoulder and hip joints above, including the pelvis, including the area), which contains muscles is rectus abdominis, external oblique, lower back muscles, lateral muscles

To stabilize the core parts of their bodies, control center movement, the power to pass on the lower limbs as the main purpose of power generation capacity, which is mainly innervated by the ability to support the core parts of the muscle strength and coordination between breathing and exercise and other factors.

2.2 *The main content of the core strength training*

The main content of the core strength training includes two aspects: the stability training of core and special strength training of core. Core stability refers to the fulcrum for limb muscle force relying on stability of core during the body's movement, and at the same time creating a situation for he upper and lower extremity strength transfer, providing reasonable body posture for the stability and displacement of body gravity. It is influenced by the control subsystem, the active and passive control subsystem. However, the special force of core is a kind of force ability for the main purpose of stabling the core of body, controlling center movement, generating and transferring force. It not only offers force support for core stability, but also can make active force in many technical action and movement skills. It is a significant force engine of the whole body movement.

2.3 Core strength training

Core strength training is a kind of strength training. Its main role is to stabilize the spine, pelvis, to maintain the correct posture; build kinematic chain, the fulcrum for the creation of limb movements, improve the body's ability to control and balance; increase the movement of the limbs from the core to the energy output; improve the efficiency of coordination of limbs; reduce energy consumption, improve the movement performance; corrects bad posture; prevention of sports injuries.

3 THE MEANING OF CORE STRENGTH TRAINING IN PHYSICAL EDUCATION

The past two years, the core strength training has been systematically incorporated into the Physical Education College, which greatly aroused the enthusiasm of students in learning and training. It has made students from passive to active learning and training, learning and training.

Consciously putting into physical training, which reflects the dominant position of students, and enhances the student's physical fitness, improves their fitness level, enhances the ability of students self-confidence. And to some extents, it also played a role in correcting students' bad posture.

4 PHYSICAL QUALITY OF COLLEGE BOYS'

Currently, the heavy pressure in studies and employment has made many students focus on academic learning, while ignoring physical exercise. Even if there is leisure time, most of the students, especially boys tend to home in the house playing computer games, and actively participate in physical activities, exercise. Currently there are some college prematurely "old" diseases, such as cervical pain, lumbar disc hernia, fatigue, poor spirit.

All these phenomena give us a very tight PE warning workers, the physical decline in male college students is powerful. In the regular physical education teaching force can also be found in the poor quality of the boys, coordination capacity, and response was slow and weak heart and lung function. So PE teachers need to take effective measures to improve student health, strengthen their personal health.

The core strength training applied to the University of Physical Education can just solve the problem, and can effectively improve the quality of men's physical and mental. And it could also be applied to attract students' interest, to mobilize the enthusiasm of students, and to cultivating students' initiative.

5 THE CORE OF STRENGTH TRAINING IN PHYSICAL EDUCATION (BOYS SECTION)

The decline in male physique University Physical Education is a significant problem, including power quality is the movement quality (strength, speed, stamina, agility and flexibility) of the base, but also affect the level of male university students the importance of physical factors. But the power play is the need to take the initiative to muscles and antagonistic muscles, and limb muscles around upper and lower extremities muscle coordination.

Advantage of the role of human limbs, left limb, the upper and lower limb muscle strength and balance, students are accustomed to use of the advantages of the lack of physical compensation limb weakness, muscle imbalance that caused by the body, stability and coordination down, thus affecting the ability of the student movement of the play, And the body of the potential injury hazards. In Physical Education, especially boys classes, core strength training makes up for these deficiencies. It is the core parts of the body through the nervous system and precise control of deep muscles, making the body more stable, more coordinated action so that students can better play sports.

5.1 Specific ways of core strength training of the boys

Core strength training is a kind of strength training, which focused on the human body of the surface and the deep muscle strength exercises. So in training, we should follow the step by step. Training principles are different from one to another. A static core strength training and dynamic core strength training are the two main ways.

5.1.1 The main content of the static core strength training of students

- ① Arm, crank pad side support: one side in the mat, still the body side of the muscles, arm or crank support, training the body side of the main part of the abdominal and external oblique muscle strength.
- ② The Swiss side of the ball on the arm support: the use of special equipment, Swiss ball, the ball on one side, static lateral muscle groups were trained outside the abdominal muscles.
- ③ Hands prone on the Swiss ball support: support sphere of human hands, still trunk muscles, abdominal rectus main training base outside the abdominal muscle strength.
- ④ Supine waist lift: Sit on the mat, hands care waist, double support, lift up the waist, until the legs into the knee 90°, hold.

- ⑤ Different side of the hand, foot and look down support: support of different limbs, waist and abdominal muscle contraction, hold on tight.
- ⑥ Prone elbow support: the upper arm forearm and elbow support, to maintain a prone position supported, two arm parallel to the body straight.
- ⑦ Hand side of the Stretch in the abdomen: abdomen arms started lifting his legs, waist and abdomen while tightening the hold.
- ⑧ "v" shaped support: supine, arms and legs to lift up the hands and feet touching the same time, tighten the abdominal muscles to maintain state.

Describes some of the students above the main application of the static main form of core strength training methods. Static core strength training of the students for improving core strength of the deep muscle groups has a very important role, and the results are evident in teaching is obvious.

5.1.2 *Power of the main contents of the core strength training*

Dynamic core strength training equipment does not depend on the contents of both the anti-gravity pad their own actions, including use of assistive devices for some special exercises, use of these unstable, not fixed special equipment, Students to fully mobilize the deep trunk muscles and small muscle groups to participate in sports.

Dynamic core strength training the main elements:

- ① Swiss ball push-ups: his hands on the ball, feet on the ground under the fixed, since the ball push-ups completed.
- ② Swiss ball crunches: upper body fixed on the ball to the ball as a fulcrum, the unstable circumstances in the volume of abdominal movements.
- ③ High enough to push the Swiss ball: the ball as a fulcrum to support the ball on the feet, hands propped on the ground
- ④ Swiss ball back to come forward: feet under the fixed, upper body prone on the ball, carried to the body as much as possible to maintain a balance, tightening the abdomen.
- ⑤ Weight-bearing swivel Swiss ball sitting: sitting on the ball, tighten the abdomen, straight body, hands and discreet, so twist and balance.
- ⑥ Ball back muscles: upper body hanging on the ball, the legs placed on the ball, try to jerk the body and keep tightening and balance.
- ⑦ load turning left and right legs mat: sit on the mat, legs and weight to the waist axis, turning left and right.
- ⑧ Still hanging leg raise: hands on the fixed, front legs flat on the move, still maintain a balance.
- ⑨ Swivel hanging around: hands on the fixed, curved legs, forcing up the legs to the waist axis, left and right rotation.
- ⑩ kick mat sit: sit-mat, legs raised, alternately kick-style kick to maintain balance.

Dynamic core strength training methods used by the content of the concrete in the implementation process, using the batch training mode and circulation training mode, intensity is not, but the duration is longer, has a good training effect, Boys generally more likely to accept it, and the completion of high quality, high enthusiasm to practice.

5.2 *The core of strength training on physical and mental quality of the College of boys*

5.2.1 *Core strength exercises on the Power Quality of boys*

By continuing core strengthening exercises, and boys and absolute power of the maximum force will be more substantial increase, in absolute power and maximum power in practice to show the process of power supplies are plentiful, Power transmission to speed up the state of the limbs, boys In the process the weight of the load can have a more substantial increase.

5.2.2 *The rate of core strength on the quality of boys*

By continuing core strengthening exercises, the core area boys dynamic power, that directs the body displacement and rotation of power will be greatly improved. In the boys under static equilibrium and the relative balance of physical force against the displacement rotary improve their ability to complete the boys in action when the rotation speed, At the same time reduce the time spent in the displacement of the references to reflect the boys leg speed, stride increased, the displacement shortened.

5.2.3 *Core body strength training to boys of coordination*

Core strength exercises can not only improve the lumbar spine, hip and other pots of the power of the nuclear region, but also can enhance the regional power transmission and improve the muscle nerve to spend a reasonable sense of the work, so that more muscle fibers in the work Acting together, the release of more energy, to improve coordination of student body.

5.2.4 *The impact of boys' Core strength training on their confidence*

In physical education lessons, in particular, boys continue to effectively carry out the core strength exercises, can improve core strength, Making the students strength quality, speed quality, coordinated quality, agility and other physical fitness are more obvious and substantial improvement Makes the boys participate in sports a strong interest in change, competition and confrontation in the performance was stronger than the core of strength training was

not involved in the students, This naturally increased the confidence of the boys, this confidence in the future the process of learning and life can play a supporting role. In the College Physical Education integrated into the core strength training, can make the boys had the movement of perception significantly increase, such as increasing running speed, the technical master in the ball faster, more accurate, Performance in the game better. Core strength training exercise will also allow students to change entertainment, proprioceptive changes.

6 CONCLUSIONS AND RECOMMENDATIONS

Teachers in teaching through enhanced self-awareness and core strength exercises on the technical mastery in Physical Education study identified the dominant position of the boys, so boys were able to take the initiative to carry out core strength exercises

To obtain a more substantial increase physical fitness, better and more happily into the physical education and activities, achievements, come to the core strength training to enhance the physical quality of the boys played an important role.

Core training in teaching methods for students to accept the not too optimistic, mainly due to some students believe that the cyclical nature of this exercise is too long, the effect of short-term training is not very clear visibility, Therefore recommended that teachers in the teaching process must be based on individual students to formulate a corresponding way to practice, to have a certain relevance, practice methods, methods should be diversified, and interesting, Closely linked with practice, so that the unabated interest the students practice, adhere to a longer period, the results yield more pronounced.

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