

Study on HIIT to improve the physical ability of naval cadets

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Abstract: HIIT has been applied to the field of competitive sports for more than 50 years, and has been proved to be effective in improving athletes' competitive ability. But HIIT training is rarely used in military training. The development of the Navy is in line with the needs of China's development, security and military strategies, the strategic arrangements for the modernization of national defense and the armed forces, and the requirements for building the armed forces' joint combat system. Naval cadets are required to have diversified capabilities. They should continue to take combat as the training guide, strengthen the demand for posts, strengthen targeted and adversarial training, and hone their abilities from difficulties to hardships. We will conscientiously implement the new generation of military training programs, increase the intensity of training, innovate training models, and strictly supervise training. We should carry out mass training competitions for soldiers in the new era and strengthen targeted and real-combat training. This paper summarizes that compared to the traditional training, HIIT training system can better improve the physical fitness of naval academy cadets, improve the physical fitness of naval academy cadets, improve the ability to adapt to the post.

1. Research background and significance

1.1 Research background

Intermittent exercise HIIT stands for high-intensity Intermittent exercise. "High intensity" refers to a short period of maximum effort, while "interval" is not just a period of exercise or recovery, but both, with intervals ranging from minutes to seconds. Nature of training system: (strenuous exercise+recovery)×many groups = high-intensity intervals.

The Navy is a strategic service and plays an important role in China's overall security and development. Guided by the goal of building a strong military, the navy should forge ahead with a pioneering spirit, speed up its transformation, and strive to build a strong and modern navy to provide strong support for realizing the dream of building a strong military.

1.2 Research significance

Naval cadets are the commanders of future warships and even aircraft carrier formations. They must have strong physical strength to support command operations, thus promoting the improvement of national defense and meeting the basic requirements of future commanders for joint operations. HIIT training system is used to improve the physical fitness of naval academy cadets, especially strength, explosive power, speed, coordination sensitivity, endurance and cardiopulmonary endurance. HIIT training means and methods are used to improve the combat physical strength of naval academy cadets, and solve the problems of simple training contents and methods. Make the cadets pass the military physical education examination smoothly.

2. Purpose and significance of HIIT training system to improve the physical fitness of naval academy cadets

2.1 Purpose of constructing HIIT training system

Firstly, to maximize the physical potential of trainees. It helps fully improve the trainees' physical strength, sensitivity and endurance, develop the trainees' nervous system and muscle system, enhance the coordination between the trainees' brains and muscles, enhance the trainees' theoretical

knowledge of scientific training, judgment, insight and understanding of battlefield command. Moreover, it assists to expand students' basic physiological knowledge, help students understand their own mental and physical ability, strength and limit, thus enhancing the ability to respond. Through the training, trainees can train themselves, set up ideals and improve the ability of analyzing and identifying war problems in the pressured and tense environment.

Secondly, to cultivate students' pride in having a healthy body. Having a healthy body enables trainees to better adapt to the pressure of the environment, improve their performance in military sports, be more willing to accept challenges, and have the confidence of "winning if you dare". A strong body is not simply to enhance physical fitness, but more importantly, to cultivate the mental quality of soldiers and develop good lifelong sports habits.

Thirdly, to enhance the naval academy cadets' ability to adapt to their posts. Train the ability of cadets to organize military sports competitions, and then enhance the ability of cadets to command operations. In the interval of high-intensity training, targeted training can be formulated according to the tasks required by naval forces on ships, such as enhancing vestibular function, improving spatial orientation ability, and improving students' balance and coordination ability.

Fourthly, to improve the physical fitness of naval academy cadets. HIIT training system is an effective way to stimulate excessive oxygen consumption after exercise. The body continues to consume calories at a high rate, and the fat stored in the body can always be "burned", so as to achieve effective fat loss. It also improves the cardiovascular function system of trainees, increases the maximum oxygen uptake, improves endurance levels, stimulates the body to secrete effective hormones, and enhances the strength, speed, flexibility, coordination, agility and explosive quality of students.

2.2 Significance of constructing HIIT training system

Cultivate students' interest and appreciation of competitive sports, stimulate their fighting spirit, and quickly adapt to high-intensity training and working environment.

Train students competitive psychology, training war consciousness. By participating in challenging training, the trainees will develop their self-confidence, tenacity, courage to command battles, battlefield decision ability, and the ability to respond quickly and execute actions under high pressure.

Cultivate students' sense of collective honor and moral concept, enhance students' sense of responsibility, honor and team spirit.

3. Factors affecting the physical fitness of naval academy cadets

3.1 Management of time, means and methods of physical training of trainees by the member team

During the period of school, students and the student company are inseparable, because the students' everyday physical training schedule, training content, methods and means are set by the student company. While due to numerous factors, such as the lack of full-time staff who are specialized in physical stamina training, the lack of professional theory knowledge, and the lack of scientific training in the execution and enforcement, students' physical fitness improvement will be directly or indirectly affected.

3.2 Trainees' understanding and attitude towards training

The individual difference of trainees is great, the degree of love for physical training is different, and the training attitude directly determines the training effect. During the group training, there is a gap in the execution of the training plan and the training goal cannot be achieved. Their understanding of the benefits of physical training is not enough, in a passive coping state.

3.3 Environmental factors

This concerns with the importance that the entire team attaches to physical training and the awareness of the trainees themselves and the small groups around them. The factors of the cadet team

include the guarantee of training site conditions, the arrangement of training time, the formulation and implementation of training plans, and the relationship between the cadet team and physical training. Individual factors include the goal setting of the training program, eating and sleeping patterns, degree of self-discipline, and support from the surrounding community.

3.4 The training plan is boring and lacks pertinence and science

The training plan lacks flexibility, practicability and entertainment. It is not enough to mobilize the students' initiative and enthusiasm for learning, so they usually just carry out simple aerobic endurance running and boring apparatus gymnastics training, and there is no pertinence to the development of training time, group number, times and training quantity and intensity.

4. The effect of HIIT training system on naval academy cadets

4.1 Improve the comprehensive physical fitness and military skills of trainees

Training methods and methods in HIIT training system are more targeted and specialized, and can improve training enthusiasm and initiative. HIIT training system improves the adaptability of naval cadets. The content of HIIT training system can be changed according to the requirements of various arms. HIIT training system has low requirements on site, space, time and equipment, so the training effect is better.

4.2 Improve cadets' achievements in military sports

Military physical education is a compulsory course in the syllabus and also an examination subject. From freshman year to senior year, the subjects learned are complex and diverse, including general subjects of the whole army and subjects of military and arms. HIIT training system can help students enhance their comprehensive physical fitness, and then meet the physical skills required by the test, and get higher scores.

4.3 Improve the psychological quality of trainees

Naval academy cadets are commanders of future battleships. The combat environment they are in is quite special. During combat, they are affected by both the climate and the ship's own environment. HIIT training system can help students to have a stable mood, able to struggle, resist setbacks, improve the psychological ability to resist pressure, and capable to build the "dare to win" confidence.

4.4 Enhance students' ability to work efficiently for a long time

Students should not only complete their studies, but also take part in various activities during their time at school. HIIT training stimulates the production of a growth hormone called the "juice of youth", which optimizes the body to function "normally" for long periods of time. It can also increase brain-derived neurotrophic factor, promoting the efficient operation of the brain for a long time, keeping the brain function at the highest level, which is conducive to all kinds of efficient conduct. HIIT training can produce more endorphins, motivate students to work harder and push them to overcome difficulties.

4.5 To solve the existing training content, means and methods of students simple single problem

With the development of the network, some fitness videos and software begin to enter the students' vision, which is helpful to the students' basic physical ability. However, the growth of the special sports skills of the trainees is not obvious. HIIT training system can develop training plans related to military sports skills for the trainees of different grades, and effectively improve the special skills of gymnastics and naval arms of the trainees.

5. Conclusion

HIIT training system plays an important role in improving the physical fitness of naval cadets, which is mainly reflected in improving the comprehensive physical fitness and military skills of cadets and improving their military sports scores. It enables students to struggle, resist setbacks, improve the psychological ability to resist pressure, help build "dare to win" high confidence, improve students' ability to work efficiently for a long time, and effectively improve the special skills of the cadets.

HIIT training system helps naval cadets quickly adapt to their jobs. It can give full play to the physical potential of trainees, stimulate their fighting spirit, and lay a foundation for lifelong military sports.

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