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RESEARCH ON SPECIAL PHYSICAL TRAINING UNDER THE STRUCTURE OF BADMINTON TECHNICAL MOVEMENT

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Abstract. Nowadays, with the development of physical training methods, badminton techniques and competition rules are constantly improving. How to improve badminton players' physical fitness and skills more effectively has become a key issue for coaches and athletes to think about. Combined with the fast and changeable characteristics of badminton itself and the specific conditions of the athletes such as physical fitness, it is the training goal pursued by various countries to adopt highly targeted scientific and effective physical training methods, which will play a good role in improving the physical level of athletes and improving the mastery of skills and technologies. Through scientific and effective special physical training, it is helpful to prevent the occurrence of sports injuries, improve the body shape, strengthen and even innovate the movement pattern.

Keywords: Specific physical training, badminton game, technique.

ИССЛЕДОВАНИЕ СПЕЦИАЛЬНОЙ ФИЗИЧЕСКОЙ ПОДГОТОВКИ В СТРУКТУРЕ ТЕХНИЧЕСКОГО ДВИЖЕНИЯ БАДМИНТОНА

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Аннотация. В настоящее время, с развитием методов физической подготовки, техника бадминтона и правила соревнований постоянно совершенствуются. Вопрос эффективного улучшения физической формы и навыков игроков в бадминтон, стал ключевым для тренеров и спортсменов. В сочетании с быстрыми и изменчивыми характеристиками самого бадминтона и особыми условиями спортсменов, такими как физическая подготовка, цель обучения, различия в требованиях между странами. Ответом на сложившуюся ситуацию является внедрение узконаправленных научных и эффективных методов физической подготовки, которые сыграют роль в универсализации спорта, физического уровня спортсменов, их навыков и технологий. Благодаря научной и эффективной специальной физической подготовке возможно предотвратить возникновение спортивных травм, улучшить физическую подготовку спортсменов, укрепить и даже обновить техническую модель движения.

Ключевые слова: специальная физическая подготовка, бадминтон, техника.

Research methods

In this paper, literature data method, induction analysis method is used to collect related references and materials about badminton physical training, borrow other experiments about badminton physical training, for a comprehensive overview, induction and summary.

Research conclusion:

Badminton is a very popular sport. Although it is a net competition type, it also needs the coordination and cooperation of the whole body muscle groups in order to continuously improve the competitive level, and badminton players also need to bear a huge physiological and psychological load. The requirements of footwork in badminton are very high, mainly including the footwork on the net, backward, left and right horizontal movements in the middle of the field, and the upper limb movements such as killing the ball, backhand picking the ball, backhand rubbing the ball, long distance ball, skateboard drop ball, etc. All these require the coordination and cooperation of the whole body muscle group to standardize the movement, the technical level can be improved faster, and the physical quality can be well developed. Full body exercise is one of the most prominent characteristics of badminton. According to the characteristics of badminton events and the specific situation of athletes, a scientific and effective special physical training method has been developed, which has a good promoting effect on improving the athletes' physical ability and technical skills.

Research conclusion: The special physical training under the technical movement structure of badminton mainly includes special strength, speed, endurance, flexibility and sensitivity training. (1) Special strength training mainly includes badminton special strength training of small muscle groups around the upper and lower limbs joints. According to the hitting technique of badminton, we can summarize it into four links: preparation, lead, swing and hitting, which requires the coordination and cooperation of the muscles around the upper limb joints. The key training sites can be divided into trapezius muscle, biceps brachii, triceps brachii, extensor (flexor) wrist flexor. The training of small muscle groups around the joint is also crucial, and the key muscle is the gastrocnemius muscle, which aims to increase the extensibility and elasticity of the gastrocnemius muscle. (2) Special speed training mainly includes reaction, movement and movement speed training. The reaction speed is not affected by other factors, so it is difficult to improve it. However, through training, the potential reaction speed ability of athletes can be displayed and stabilized. The improvement of reaction speed depends largely on the proficiency of athletes in response to signals. Therefore, the training methods of reaction

speed can be signal stimulation, selective exercise, etc. The training method of movement speed can be used to narrow the boundary of the badminton training field and shorten the time to complete each exercise. Mobile speed training can adopt various kinds of fast running, 10 to 20 meters of turn-back running, speed training over several landmarks, front and back running, etc. (3) The special endurance training can adopt the intermittent special footwork exercise, with the step, pad step, step, cross step and their comprehensive application; Skateboard drop ball, backhand pick ball, rubbing ball, long ball and other techniques shall be combined with corresponding parallel and cross steps for comprehensive and individual technical training. (4) Special sensitivity training can improve the players' ability to recognize and judge the false action and the ball line through various ball path exercises. Organize more athletes to participate in the competition, adapt to various competition environments, deal with various types of opponents, conduct post-game video analysis for various situations on the field, and conduct targeted quality training. It can be combined with reaction speed and movement speed for actual combat training. (5) In the special flexibility training, the techniques such as badminton ball rubbing, ball picking, and ball drawing require forward bending and side waist movements, so as to use the ability to exercise the forward movement of the waist and the method of waist flexibility. In view of the characteristics of badminton high and long ball, skateboard drop ball, killing ball and other techniques that need to pull the back bow, the flexible method of practicing the backward movement of the waist is mainly used.

Conclusion

Although badminton is a net antagonistic sport, its technique, footwork and other movement techniques as well as the requirements on physical fitness determine its outstanding characteristics of whole body movement and high intensity. Only by formulating scientific and effective special physical training plans according to the technical characteristics of badminton can athletes master and improve their sports skills and create excellent sports results. This paper makes a systematic and in-depth research on the special physical training of badminton under the structure of technical movement by collecting data and investigating. Power quality is the basis of a certain, compared with other project badminton players very tall to the requirement of speed strength, strength, endurance, for they need to attach importance to the development of effective training absolute power, speed quality in badminton training occupies the important position, the reaction speed, movement speed and movement speed is in the process of training for the badminton ball, Speed variable characteristics need to be paid attention to. Speed endurance is also very important, but also need to have a good capacity of aerobic metabolism. The training of physical quality must be combined with the technical characteristics of badminton in order to obtain obvious and effective training effect.

Reference literature

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SIMULATION RESEARCH ON HIGH QUALITY OF OUR NATIONAL FITNESS BASED ON SYSTEM DYNAMICS

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Abstract. With the coming of the "Fourteenth Five-Year Plan" period, China has put forward new requirements for national fitness. Under the guidance of the policy, the momentum of national fitness in China has been moving towards high quality. This paper uses the theory and method of system dynamics to build a system dynamics model for the high-quality development of national fitness. It uses the existing data to locate and predict the future direction of the high-quality development of the national fitness in China, and more accurately excavates the development drawbacks and future development space of the national fitness in China. The results show that people's acceptance of fitness for all is becoming popular, and the development trend is getting better, but people's awareness of fitness is weak, facilities and services are not perfect, the development mode is unitary, and the project security is not perfect. Therefore, China should base on the fundamental of quality and benefit, promote the reform of fitness for all system, stimulate market vitality, sublimate the concept of fitness for all development, cultivate energy conservation awareness Only by changing the form of national fitness development, strengthening scientific and technological support for national fitness, and optimizing fitness efficiency, can the implementation of multiple development models more firmly promote the high-quality development of national fitness.

Keywords: National fitness, High quality development, System dynamics.