Research on the Effect of Physical Education Intervention based on Sunshine Sports

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Abstract: Under the background of the sun sports activities of hundreds of millions of students in China, it is necessary for sports workers to use sports prescriptions to conduct extracurricular physical exercise guidance for students, which is necessary for the effective development of students' overall physical quality. The paper uses literature methods, experimental methods and mathematical statistics to conduct a study on exercise prescription intervention for some college students for 8 weeks to improve endurance, strength and flexibility. The results of the exercise experiment showed that the girls' endurance, flexibility, strength and male patience and endurance quality ($p < 0.05$) increased significantly, and there were significant changes.

1. Introduction

All along, the physical health status of college students is the focus of people's attention. However, in recent years, according to the results of the national college physical fitness test, the physical health status of college students has been declining year by year and their health status is not optimistic. Therefore, understand the physical health of contemporary college students. It analyzes the factors influencing the physique health of college students and explores the corresponding intervention strategies, which is of great significance to the improvement of college students' physical quality. In April 2007, the Ministry of Education, the State Sports General Administration, and the Central Committee of the Communist Youth League jointly issued the Notice on Launching the National Sunshine Sports for Hundreds of Millions of Students. The promulgation of this policy opened up a new way of thinking about the development of school sports and education. The main tasks and objectives of college physical education work are to enhance the physical fitness of college students and improve their physical health, so that students can develop lifelong physical exercise habits. College students are the future pillars of the country and talents in important fields. Their physical health is of vital importance. The physical health of college students directly affects their future work efficiency and is extremely important to social development. This is one of our key areas of concern. College sports workers have an unshirkable responsibility and obligation to improve the physical health of college students. It is the duty of every physical worker to guide college students to carry out scientific physical exercise. Therefore, the corresponding reform of university sports work, taking sunshine sports as a good opportunity, using scientific teaching methods to make necessary interventions on college students' physical health is the only way to enhance the physical health of college students.

2. Research objects and methods

In this study, through the test results of the physical fitness standards of the students of Zhangzhou Teachers College, 60 sophomores (non-art and body majors) who failed the physical fitness test and volunteered to participate in the exercise prescription experiment were selected. The subjects were healthy and had no contraindications to exercise prescriptions.

Through China Knowledge Network and Wanfang Database, we have reviewed the relevant literatures on the physical intervention of sports prescriptions for students in the past 10 years, and grasped the latest research trends of this topic, providing theoretical basis and guidance for the completion of the thesis.

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Through the results of the physical test at the beginning of the sophomore year, 60 students were divided into endurance group, flexible group and strength group according to the subjects' interests, hobbies and test results, 20 in each group. The data of the three groups of students' physical fitness tests were compiled. The endurance quality was 1000m for men and 800m for women. Flexibility: Sitting body flexion. Strength: 50m, standing long jump, pull-ups (male), one-minute sit-ups (female). The key data were compiled using the physical test data of the first week (before the experiment) and the first week after the end of the exercise prescription 8 weeks (after the experiment), and the experimental results were compared and analyzed through the secondary test results.

College students' emotions, fatigue status, interest, and whether the movements in the movement are standard or their own subjective feelings will affect the exercise effect. Before the exercise prescription teaching, it is necessary to carry out the teaching of relevant theoretical knowledge, strengthen the understanding of college students on the implementation of exercise prescriptions, in order to improve the initiative and effectiveness of their exercise. In the implementation process of exercise prescription, the research object should make timely feedback according to its own exercise effect, physical condition and subjective feeling, and adjust exercise prescriptions in time to exercise.

Exercise three times a week with exercise prescriptions, each training time is 1 hour, and adjust the amount of exercise according to the overall feeling of the subject. Three sets of physical fitness tests were completed one week before and after the experiment to ensure the validity of the experimental group test.

Before the endurance group, the exercise amount and the exercise load were determined according to the student's measurement index. In the experiment, according to the immediate heart rate test after exercise, the heart rate of the endurance group students was in the range of the target heart rate, above or below the target heart rate range. In time, it is necessary to appropriately reduce and increase the exercise load, so that the exercise heart rate is within the range of the target heart rate during the next endurance training, and the exercise intensity and the amount of exercise should be gradually adjusted throughout the exercise test tutorial.

When the flexible group begins to perform flexible training, when the practice part has a pulling feeling, it stays for 10 - 15s. After the feeling of pulling is gone, continue to practice and repeat 3 - 4 times. As the degree of change in the amplitude of each joint increases and the adaptability increases, the duration is gradually increased. After a few weeks, it can stay for 45 - 60s each time. After a short break, the students need to adjust the pulling force according to the pulling feeling. The dynamic stretching exercise is repeated 3 - 4 times, and the exercise intensity is also controlled by the muscle stretching feeling and the number of repetitions. The strength group determines the amount of exercise based on the results of pre-experimental measurements. The amount of exercise for dynamic exercises is determined by the number of times a single action can be completed, typically 10RM - 15RM; the amount of static exercise is determined by the sustainable duration of a single action. Usually 10 - 30s, do 1 - 2 groups. In the experiment, the exercise content is mostly practiced by using its own load (sit-ups, supine, horizontal bar, frog jumping, etc.).

3. Results and analysis

Through the 8 weeks of endurance exercise prescription teaching for the endurance group, the results of the 800 meters after the experiment were compared with the 800 meters before the experiment, the scores improved significantly, there was a significant difference ($p < 0.01$); the boys in the endurance group There was a significant difference between the post-1000 m score and the pre-experiment 1000 m score ($p < 0.05$), and the endurance group had a large amount of exercise on the exercise day after the exercise. The classmates experienced muscle soreness, which was in the period of muscle fatigue and could not reflect the true physical quality of the students well, which had a certain impact on the test results. Through the inquiry survey after the exercise prescription stage, most of the students felt that the test was more comforTable during the test, there was no strong discomfort in the previous test, and the anxiety improved. This indicates that the endurance

exercise prescription has a good improvement on the endurance quality of the students. The promotion effect is related to the implementation of aerobic exercise-based training content, and the endurance prescription teaching is based on the basic conditions of the students before the experiment, following the rules and principles of fitness and physical education teaching and prescription formulation, to develop endurance and enhance physical fitness. Incorporating into the training content, the students' endurance quality is improved in a targeted manner, which has a good effect on the development of students' endurance quality.

By performing an 8-week flexible exercise prescription teaching on the flexible group, the scores of the male and female sitting body flexion trials were significantly improved compared with the pre-experimental scores, and there were significant differences ($p < 0.01$). It shows that compared with normal physical education, flexible exercise prescription can greatly improve the flexibility of students. The reasons are: flexible exercise prescription for students' joint size, flexibility for upper limbs, flexibility of trunk and flexibility of lower limbs The more systematic training is scientific and reasonable for improving the overall flexibility; the flexible training combines the dynamic and static training to make the training both interesting and can be combined with various exercise methods to improve the effect of the students' exercise; At the same time, in the flexible training, the load intensity is mainly controlled by the individual, the muscle has the feeling of stretching, but there is a slight pain, and at the same time, the auxiliary exercises are carried out, and the joint movement amplitude of each part of the body is improved in a targeted manner. However, since the normal physical education is mainly for the recovery of physical fitness, considering the flexible training content, there is no flexible prescription teaching, so there is a very significant improvement. This result has certain factors attribuTable to the failure of the normal physical education teaching. The potential of flexibility is revealed.

Through the implementation of the 8-week strength prescription teaching for the strength group, the girls' 50-meter run, standing long jump, and 1-minute sit-ups were compared with the pre-experimental indicators, and the scores improved significantly, with very significant differences ($p < 0. 01$), indicating that the strength exercise prescription has an excellent promotion effect on the comprehensive development of female lower limb strength and core strength; in the strength group, the 50-meter running, standing long jump, pull-up and 50-meter running before the experiment, There is no significant difference between the indexes of the long jump and the upward pull-up. When comparing the average values of the test items, the overall scores of the strength group after the experiment are better than the overall results before the experiment. The main reason is that the strength of the boys is better than that of the girls. Therefore, it is normal to improve slowly. The very significant change in girls is due to the fact that there is too little exercise in the normal teaching phase, so after a targeted exercise prescription exercise, the increase is large. In general, the strength exercise prescription determines the exercise content according to the physical characteristics of the student, can effectively guide the student to exercise, and adjusts the exercise content and the amount of exercise in time by monitoring the heart rate of the student after exercise and the subjective sense of movement of each classmate. Observe the students' emotional mood, promptly guide the low mood, praise the positive attitude, and mobilize the active atmosphere; ask the muscles such as muscle soreness after exercise, explain the causes of such phenomena, and adjust and relax in time to eliminate their psychological effects. During the implementation process, students are tested on an irregular basis, and each student is tested and evaluated to inspire them to be competitive.

There was a significant change in the endurance quality of female students ($p < 0.01$). There was a significant change in the endurance quality of male students ($p < 0.05$), indicating that endurance exercise prescription teaching has a significant effect on the endurance quality of students.

The flexibility of boys and girls has a very significant change ($p <0.01$), indicating that flexible exercise prescription teaching has a good effect on the improvement of students' flexibility.

There is a significant change in the strength of girls ($p <0.01$), indicating that the strength exercise prescription teaching has a good effect on the improvement of girls' abdominal strength and lower limb strength; there is no significant change in the strength of boys, indicating that the

exercise prescription The improvement of boys' strength quality has no significant effect, and it also indirectly indicates that female college students have poor autonomy in daily exercise and do not pay attention to strength practice.

Targeted, systematic, and adaptable health exercise prescriptions can improve students' interest and effectively improve the effect of students' exercise. It is a feasible and effective method.

4. Conclusion

The measurement index of endurance quality should be simple and feasible, and the measurement result should accurately reflect the objective quantity. In order to better reflect the effect of endurance exercise prescription teaching, it is recommended to use the step test. In order to fully reflect the effect of flexible exercise prescription training, it is necessary to emphasize the precautions during training to prevent muscle strain and affect the practice effect. When measuring flexibility, it is necessary to consider the influence of time and temperature on the test results, and on the upper limbs, lower limbs and trunk. The strength of the quality of the comprehensive exercise and evaluation. Strength prescriptions should adjust the amount of exercise according to the training objectives. The exercise intensity of fitness exercise prescription content must be different from person to person, pay attention to control and grasp at any time, try to implement personalized exercise prescription, so that students learn to adjust exercise intensity through self-motion.

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