

The Influence and Method of Aerobics Training on Female College Students' Body Shape

-- Taking Nanchang Hangkong University as an Example

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Abstract

Aerobics is in line with the characteristics of aerobic exercise, and has a positive effect on improving the physical shape of female college students and enhancing their athletic ability. This paper takes the body shape of female college students who choose aerobics as the research object and starting point, and the effect of six-month aerobics training on the body shape of female college students is the research goal, using SPSS17.0 and Excel software to conduct mathematical analysis Statistical analysis, with the help of literature method, questionnaire method, measurement method, etc. to study their body shape, find out the method that can actually improve the body shape of female college students, and provide certain theoretical basis and practical reference for the aerobics course content of Nanchang Hangkong University. The research results show that: (1) Aerobics training has a significant effect on reducing waist circumference, calf circumference and body weight, which provides practical reference for current female college students to pursue a well-proportioned body. (2) Aerobics can enhance the muscle strength and flexibility of female college students, improve the phenomenon of excessive thinness or obesity of female college students, and better create high-quality talents with all-round development of morality, intelligence, body, beauty and labor. (3) From the perspective of improving human health, only aerobic exercise can better affect the human body. Therefore, aerobic exercise is the core of aerobics, and it is also the most positive aspect of affecting the human body. (4) When female college students dance aerobics in front of the mirror to show their most beautiful posture, they will be full of self-confidence and joy, so that they will have the confidence to continuously hit new heights, and they will also be affected in daily life. The most confident side is displayed.

Keywords

Aerobics Training; Female College Students; Body Shape.

1. Introduction

1.1. Basis for Topic Selection

Aerobics is a sport with the accompaniment of music, using physical exercises as the basic means and aerobic exercise as the basis to achieve the purpose of improving health, shaping body and entertainment. According to the purpose and task of practice, aerobics is divided into two categories: fitness aerobics and competitive aerobics. The movements and routines of fitness aerobics are designed on the premise of ensuring that bodybuilders can take in oxygen to the maximum during exercise, make full use of oxidation to burn glycogen in the body, and focus on burning fat as energy supply. Metabolism, the purpose of re-establishing a higher functional level of the human body. Competitive aerobics shows the ability of athletes to continuously perform complex and high-intensity movements through the perfect completion of difficult movements under the accompaniment of music. The set must be creative through

the perfect fusion of all movements, music and performance. The current female college students are more suitable for fitness aerobics in terms of age and physical quality, in order to achieve a satisfactory body pursuit.

With the improvement of women's status in today's society, female college students have higher and higher requirements for their own physical and temperament. In addition, the current society also reflects that with the development of the economy, people's life rhythm changes, and many negative effects also follow, such as the changes in body composition brought about by obesity, which have serious consequences for people's health. The younger generation of female college students is more prone to obesity, which not only seriously affects their body composition, but also has a serious impact on their daily life and study. How to reduce weight and optimize body composition is the current female college students are extremely concerned about Content

1.2. Research Purpose and Significance

1.2.1. Research Purpose

This research takes the body shape of female college students who choose aerobics as the research object and starting point, and the effect of six-month aerobics training on the body shape of female college students as the research goal, to find out the actual ability to improve the body shape of female college students. Methods.

1.2.2. Research Significance

Aerobics is a sports carried out with the accompaniment of music, which has a positive effect on cultivating the temperament and cheerful personality of female college students, and also has a good effect on cultivating students' interest in physical exercise. The ability to coexist and good interpersonal relationships can also cultivate their spirit of unity, cooperation and tenacious struggle. Aerobics is a dynamic bodybuilding exercise. Aerobics has a high frequency of upper and lower limbs, and combines the movements of running, walking and jumping. After female college students go through the exercises of running, walking and jumping, they can effectively enhance their muscle strength, so as to improve the flexibility, strength, coordination, sensitivity and other physical qualities of female college students. Ultimately, it can improve the body's immunity and prevent the occurrence of diseases.

This research is mainly aimed at groups such as female college students, to initially explore the impact of aerobics on the physical and mental health of college students, and to make some useful attempts for the research on the improvement of physical and mental health of college students and the health and health care of college students. Physical education curriculum reform provides a certain empirical basis.

2. Literature Review

2.1. Review of Domestic (Foreign) Research Status

2.1.1. Review of the Current Situation in China

Yu Fang mentioned that according to the body shape of female college students, the physical conditions of female college students were analyzed by sorting and comparing indicators such as height, weight, and measurements. According to the results of the analysis, different methods of training are carried out, and scientific and effective guidance is carried out to lose weight, remove fat, and perspire. Let female college students develop a good habit of physical exercise, and by reducing food calories, consider the body shape of female college students from all aspects, and achieve the standard as much as possible. Li Xueying mentioned that the choreography of aerobics involves all parts of the human body, so that the joints of all parts of the body can be fully activated and the muscles can be developed in a balanced manner.

Therefore, while aerobics can reduce the body fat content of female college students, it can also It can obviously increase the muscle strength of female college students and make their body shape appear more fit.

2.1.2. Review of the Current Situation Abroad

Li Ya-nan mentioned that the aerobics elective course is open to girls in the same grade. Girls in each class are familiar with each other because of the aerobics optional class. They practice, cooperate and communicate together, which is conducive to building a good relationship with each other. Friendship, promote the development of interpersonal relationships, each student cooperates with each other to complete aerobics movements and changes in formation. Through continuous cooperation, a good teamwork ability has been formed, which has a good effect on the reflection of personal self-worth, and fully enhances one's self-confidence; at the same time, it is mentioned that aerobics is a kind of aerobic exercise, and the content includes "walking, "Running, jumping" and other movements, after an aerobics class practice, consumes a lot of energy for female college students' bodies, which is conducive to the release of personal negative emotions, achieves the purpose of entertaining the body and mind, and makes the character more cheerful.

To sum up, aerobics training can promote the full activity of the joints of various parts of the body of female college students, so as to balance and stretch the muscles of each part, which has an important influence on the body shape and function, and has a good effect on the body development. For female college students, they are in the stage of unfinished body. Participating in aerobics training plays an important role in correcting the body shape and function of female college students. Using the beautiful movements and postures of aerobics to promote female college students to form beautiful postures and shapes. On this basis, gradually cultivate students' pursuit of art, so as to improve the comprehensive ability and quality of female college students.

3. Research Objects and Research Methods

3.1. Research Objects

The research objects are female college students who take aerobics courses at Nanchang Hangkong University and participate in aerobics training three or more times a week.

3.2. Research Methods

3.2.1. Documentation Method

Through CNKI, VIP.com, and the library of Nanchang Aviation University, a large number of related literatures and materials on the influence of aerobics training on female college students' body shape in the past five years were reviewed, which formed a certain theoretical basis for the proposal and subsequent development of this paper.

3.2.2. Questionnaire Survey Method

Table 1. Questionnaire distribution and recovery (N=50)

Issue object	Number of releases	Number of recycling	Recovery rate
School Art Troupe	12	12	100%
School Aerobics Team	15	15	100%
Elective aerobics class	23	23	100%

Before and after systematic aerobics training, the same questionnaires were distributed to female college students who took elective aerobics courses at Nanchang Aviation University and participated in aerobics training three or more times a week. A total of 50 questionnaires

were distributed to the cheerleaders of the school art troupe, the school aerobics players and the female college students who took aerobics, and 50 valid questionnaires were recovered.

3.2.3. Mathematical Statistics

The collected effective data were analyzed by SPSS17.0 and Excel statistical methods, mainly using descriptive statistics of mean and standard deviation and paired sample T test, ($P > 0.05$ was no significant difference and $P < 0.05$ is a significant difference and $P < 0.01$ is a very significant difference as the test standard.)

3.2.4. Measurement Method

Test the female college students' body shape, physical fitness and physical function indicators through testing tools such as tape measure, spirometer, stopwatch and so on. In order to ensure the authenticity and validity of the data, 20 samples were randomly selected before and after the two questionnaires were distributed, and measurement tools were used to verify the data of various test indicators of female college students.

4. Research Results and Analysis

4.1. The Influence of Aerobics Training on the Body Shape of Female College Students

4.1.1. Changes in Body Circumference of Female College Students Before and After Aerobics Training

Table 2. Changes of body circumference of female college students before and after aerobics training ($X \pm SD$, $N=50$)

Test indicators	before training	after training	P
Height(cm)	164.72±3.53	164.78±3.49	>0.05
Weight(kg)	54.88±4.05	53.92±3.62	<0.01**
Bust(cm)	85.70±4.30	85.60±4.24	>0.05
Waist(cm)	65.90±3.51	64.82±3.15	<0.01**
Thigh(cm)	50.94±3.16	50.86±3.12	>0.05
Calf(cm)	29.02±2.78	28.94±2.75	<0.05*

Note: * $P < 0.05$ means there is a significant difference, ** $P < 0.01$ means there is a very significant difference

As shown in Table 2, various test indicators of body circumference of female college students before and after aerobics training changed accordingly (see Appendix II for detailed data). There were no significant differences in height, bust circumference and thigh circumference among female college students. On the one hand, since the age of female college students is generally 18 years old and above, from a physiological point of view, the development of height and chest circumference tends to be stable, and there will be no signs of growth in height and chest circumference in short-term training. During aerobics training, there will be regular physical training, which can improve the hunchback phenomenon of female college students, but there is no significant change in height. Secondly, the calf circumference decreased from 29.02 ± 2.78 cm before training to 28.94 ± 2.75 cm after training and the P value was < 0.05 , indicating that there was a significant difference in the calf circumference of female college students before and after aerobics training. In the complete set of jumping exercises, pay attention to "tightening the instep", so that the triceps of the calf has been in a state of continuous contraction during the training, thereby making the calf muscles firmer, and the calf muscles will be more slender through the later stretching. Finally, the waist circumference

decreased from 65.90±3.51 cm to 64.82±3.15 cm before exercise, and the weight decreased from 54.88±4.05kg to 53.92±3.62 kg before exercise, and the P value was less than 0.01, indicating that the waist circumference and body weight were very significant before and after aerobics training. The difference, which has a lot to do with aerobics, is a moderate-intensity, long-duration aerobic exercise, which can largely achieve the purpose of reducing fat and shaping. During the six-month training process, I will maintain a systematic waist and abdominal core training every week. The abdominal fat burns quickly, and the body is more symmetrical than before. This shows that aerobics training has a great role in promoting the weight reduction of female college students.

4.1.2. Physical Fitness Changes of Female College Students Before and After Aerobics Training

Table 3. Analysis of various physical qualities before aerobics training

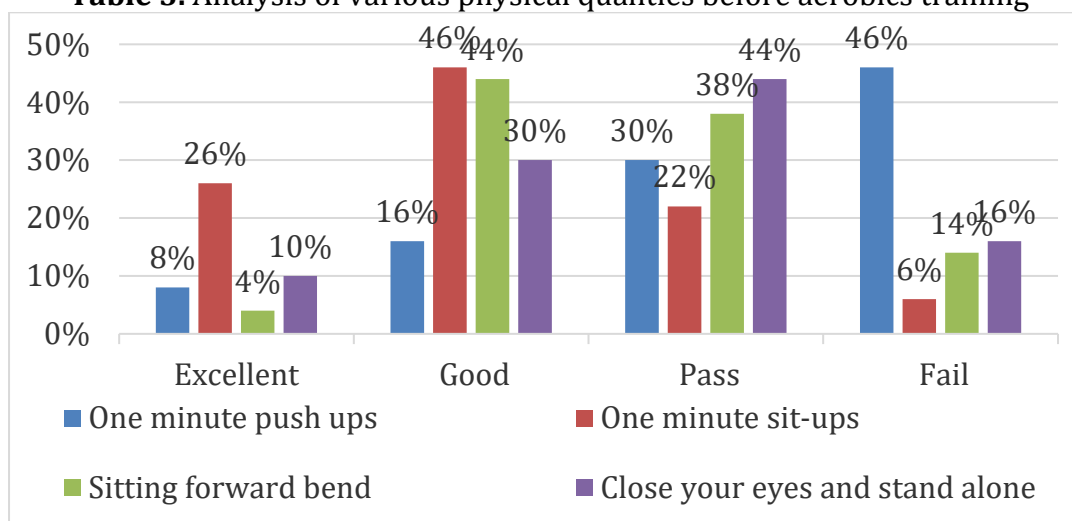
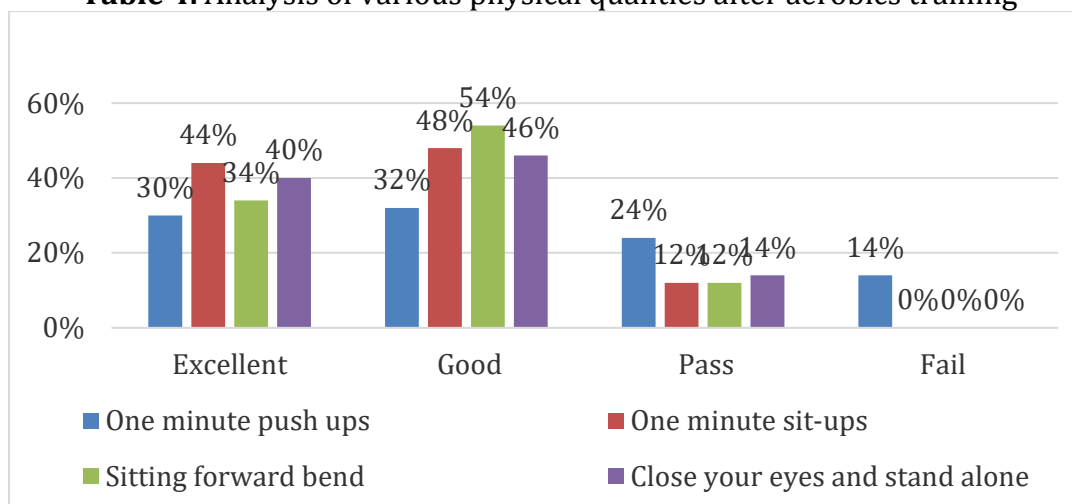


Table 4. Analysis of various physical qualities after aerobics training



Note: One-minute push-ups (pieces) are divided into excellent (27-35), good (21-26), pass (11-20), and fail (6-10); one-minute sit-ups (pieces) are classified as excellent (52-57), good (46-51), pass (26-45), fail (16-25); sitting forward flexion (cm) is divided into excellent (22.2-26.3), good (19-22.1), pass (6-18.9), fail (2-5.9); closed eyes and single-legged stand (s) are divided into excellent (37-90), good (16-36), pass (6-15), fail (3 ~5)

The physical fitness indicators before and after aerobics training are one-minute push-ups, one-minute sit-ups, sitting body forward bends, and closed eyes and one-legged stand. One-minute

push-ups are commonly used exercises in aerobics training; one-minute sit-ups Sitting and sitting forward flexion are compulsory physical examination items for college students; closed eyes and one-legged stand are common indicators to test the balance of female college students. As shown in Tables 3 and 4, before the aerobics training, only 4 female college students achieved full marks in one-minute push-ups, and 23 failed. increased to 15 people. Before the aerobics training, most of the test scores of female college students were between passing and good, and other physical test items for college students were also very difficult to complete. After the training, the test scores of female college students were concentrated between excellent and good. In the meantime, not only has their grades improved to a higher level, but their physical fitness has also risen to a higher level. Among all the projects, the flexibility of girls is the fastest in the past six months. This is because the teacher will ask the students to press the ligament before kicking, which is the key to improving the ligament of female college students.

4.1.3. Physical Function Changes of Female College Students Before and After Aerobics Training

Table 5. Physical function changes of female college students before and after aerobics training (N=50)

Test indicators	before training	after training	P
Lung capacity (ML)	2784.82±216.05	2884.24±194.90	<0.01**
Heart rate at rest (beats/MIN)	73.30±3.58	68.48±2.76	<0.01**

As shown in Table 4, although there are certain differences in lung capacity among different individuals, it is unshakable as one of the effective indicators to evaluate the lung function of college students. Among the 50 female college students tested in this test, the lung capacity and the There was a very significant difference in resting heart rate before and after exercise (see Appendix II for detailed data). The vital capacity increased from 2784.82±216.05ml before exercise to 2884.24±194.90ml after exercise, indicating that aerobic aerobics can increase respiratory muscle strength. Increases the elasticity of the lung tissue, thereby improving the function of the respiratory system. Through regular aerobic exercise, the vitality of respiratory muscles can be enhanced and the elasticity of lung tissue can be maintained; the heart rate at rest drops from 73.30±3.58 beats/min before exercise to 68.48±2.76 beats/min after exercise. The decrease of , is conducive to enhancing the mental reserve during exercise, and the heart has sufficient rest time after work to make the heart work more efficient and labor-saving.

4.1.4. Changes in Image, Temperament and Self-Confidence of Female College Students Before and After Aerobics Training

Table 6. Changes in image, temperament and self-confidence of female college students before and after aerobics training (N=50)

Radon	YES	NO
Can you lose weight after aerobics	94%	6%
Can aerobics improve temperament after exercise	88%	12%
Does aerobics workout make you more confident	90%	5%

As shown in Table 5, among the 50 people who participated in the questionnaire survey, 47 people, accounting for 94%, believed that six-month aerobics training could make them thinner; 44 people believed that six-month aerobics training could improve their temperament. people, accounting for 88%; 45 people, accounting for 90%, think that six-month aerobics training can make people more confident. The reason why aerobics training makes female college students feel more confident is that not only should they focus on the completion of movements during

training, but also the rendering of expressiveness should not be underestimated. Female college students can exercise to assist them in learning, Be more confident in life.

4.2. Research on the Method of Aerobics Training on the Body Shape of Female College Students

4.2.1. Focus on Improving the Training of the Core Muscles of the Waist and Abdomen

Whether it is aerobics or other projects, the core muscle group is very important. It can control the pelvis and the trunk in a stable posture. After each basic training of aerobics, ensure half an hour of physical fitness practice, focusing on improving the core of the waist and abdomen.

4.2.2. Regularly and Quantitatively Carry out Physical Learning

Aerobics itself is a project that contains "beauty", and physical learning is also essential. When doing physical learning, we must ensure the appropriate amount of exercise, and at the same time pay attention to whether the movement and the rhythm of the music are synchronized. The most important thing is the training of students' posture, including hand position, foot position and body posture. Among them, the hand position practice mainly draws on the hand position movements of ballet. Several hand positions can strengthen the control of the students' arms and the standard degree of the movements; the foot position practice mainly practice the stretching of the instep and the basic standing posture. The instep affects the beauty of aerobics. One of the main factors, so it is necessary to persevere in the instep exercises, so that you can stretch more after the practice; the body posture exercises are mainly to train the students' head, neck, back and waist and abdomen regularly, so that the students can form a certain muscle memory. The beauty of strength and posture of aerobics can be better displayed when performing aerobics.

4.2.3. Ensure the Necessary Intensity during Training

If there is no exercise load, there will be no training effect. To achieve the goal of physical education and promote health, it will become a tree without roots. In physical education, only when the amount of exercise and exercise intensity are kept appropriate, can a better teaching effect be received. Students' exercise intensity Too big or too small is not conducive to the achievement of teaching goals, and is not conducive to the healthy growth of students. Teaching should be based on individual differences and different needs of students.

4.2.4. The Importance of Flexibility Training

Flexibility is one of the essential qualities of athletes, and flexibility plays a very important role in aerobics. In the usual training, three training methods are mainly used: dynamic stretching, static stretching and combination of dynamic and static. Among them, the most widely used is the combination of dynamic and static. For example, it is often used in the development of hip joint and lower limb flexibility training. To kick, control, move, press. Leg kicking is a dynamic training method; leg movement and leg control are static training methods; leg pressing can be static or dynamic, but only a combination of dynamic and static methods can develop students' flexibility at the same time. without reducing its flexibility and elasticity.

5. Conclusion and Recommendations

5.1. Conclusion

(1)Aerobics training has a good effect on reducing the weight, waist circumference and calf circumference of female college students. On this basis, it can shape the calf muscle line and strengthen the waist and abdomen core.

(2)Aerobics can enhance the muscle strength and flexibility of female college students, improve the phenomenon of excessive thinness or obesity of female college students, and better create

high-quality talents with all-round development of morality, intelligence, physique, beauty and labor.

(3) From the perspective of improving human health, only aerobic exercise can better affect the human body. Therefore, aerobic exercise is the core of aerobics, and it is also the most positive aspect of affecting the human body.

(4) When female college students dance aerobics in front of the mirror to show their most beautiful posture, their hearts will be full of self-confidence and joy, so that they will have the confidence to continuously hit new heights, and they will also be affected in their daily life. The most confident side is displayed.

5.2. Recommendations

(1) Strengthen the study of aerobics theory courses, let more students understand the way of combining practice and theory of aerobics, cultivate the concept of lifelong exercise for female college students, find suitable programs for their own exercise, and achieve the purpose and needs of exercise.

(2) In the white-hot stage of national fitness, good physical quality is of great significance to contemporary college students. Physical education teachers need to focus on strengthening students' quality education, transform traditional concepts for innovation, stimulate students' enthusiasm for active learning, and improve teaching quality.

(3) It is recommended to enrich the form and content of aerobics, such as Latin aerobics combined with Latin, fighting aerobics combined with boxing, and hip-hop aerobics combined with hip-hop. In order to attract more people to participate in the trend of aerobics exercise.

(4) During aerobics training, the load should be controlled at the best level, and the pleasure brought by aerobics will not be lost due to the excessive training volume, nor will it be impossible to reduce the weight due to the too small training volume. The purpose of fat fitness, so as to meet the goal of female college students to pursue fat loss and weight loss and increase self-confidence.

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