

## **Analysis of the Influence of "Health Qigong·Baduanjin" on Some Physiological Indicators and Physical Fitness of College Students**

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**Abstract:** As a treasure of Chinese traditional sports, Health Qigong is widely circulated among the people. Experts and scholars organized by the General Administration of Sport of China created and edited some routines. Among them, "Health Qigong·Baduanjin" The fitness effect is loved by the general public, and the State Sports General Administration has also strengthened the work of promoting Health Qigong into colleges and universities. In order to better promote the promotion of "Health Qigong Baduanjin" in colleges and universities, especially among non-sports majors It is necessary to analyze and study the fitness effects and movement characteristics of college students based on "Health Qigong Baduanjin", so as to provide data support and reference for further research on "Health Qigong Baduanjin". Analytical methods and other methods were used to study and analyze the research objects. The experimental method was mainly to intervene in the Health Qigong teaching classes carried out by the School of Mechanical and Electrical Engineering, Pujiang College, Nanjing University of Technology, and to compare and analyze the physical fitness of the experimental objects before and after the data. The following conclusions were drawn: (1) Practicing "Health Qigong Baduanjin" can significantly improve the physical fitness of college students. Compared with students of the same major, on the premise of practicing Baduanjin in physical education from the first half year of freshman year to the first half year of sophomore year, the sophomore The attainment rate of the physical test was higher than that of the freshman year. (2) Performing the exercise of "Health Qigong Baduanjin" can change the performance of lung ventilation, heart rate, and muscle endurance in sitting and forward flexion, which shows that performing "Health Qigong · The exercise of "Baduanjin" can improve the physical fitness of college students.

**Keywords:** Health Qigong; baduanjin; college students; physiological indicators; physical fitness

In the context of quality education, the importance of physical education in the education system has been significantly improved, so the professionalism and standardization of physical education at all stages have been significantly improved at this stage. Summarizing the physical education at the university stage at this stage, we can see that the educational content is more diverse, and the specific content of Health Qigong has been introduced into the university physical education, and Baduanjin is one of them [1]. At this stage, Baduanjin has become a very important item in physical education in many colleges and universities, and a special assessment process and content have been set up for Baduanjin education. Starting from the analysis of educational practice,

the reason why Baduanjin teaching has attracted much attention is that it plays an important role in improving the physiological indicators of college students and strengthening their physical fitness.

### **1. Health value Analysis of Baduanjin**

As an important item of physical education in colleges and universities, Baduanjin has been popularized in many colleges and universities. Based on the analysis of the health value of Baduanjin from the perspective of physical health and mental health, it can be seen that it is mainly manifested in the following aspects: (1) Baduanjin can eliminate fatigue. As far as college students at this stage are concerned, although they are relatively free on the surface, they still have relatively high academic pressure. In the face of relatively heavy pressure, fatigue is the normal state of college students [2]. Practicing Baduanjin can help eliminate the fatigue of college students and keep them in a healthier state. It plays a prominent role in improving the sub-health status of college students. (2) Baduanjin has outstanding effects in correcting students' shoulders and backs. Affected by bad sitting and lying postures, college students' shoulder and back problems are more prominent. Practicing Baduanjin can help correct the students' shoulders and backs, so as to make their posture more straight. (3) Baduanjin plays a positive role in strengthening the blood circulation of students' bodies. Analyzing the specific exercises of Baduanjin, the correct practice posture can effectively strengthen the muscles of the chest, ribs, shoulders and arms, thereby strengthening the blood circulation of the body, which has significant significance for the adjustment of students' physical and mental states [3]. Generally speaking, the practice of Baduanjin is positive for students' health, so it is necessary to pay attention to the active implementation of Baduanjin in physical education.

### **2. Effects of Baduanjin on the physiological indicators and physical fitness of students**

Starting from the perspective of physical health, Baduanjin does play an important role in promoting students' physical and mental health. The specific impact of Baduanjin practice on students' physiological indicators and physical fitness needs to be determined through data analysis. Make intuitive judgments.

#### *2.1. Basic information*

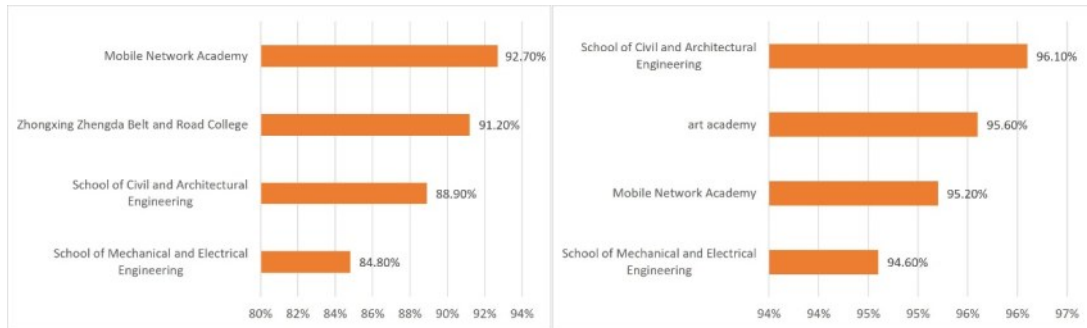
In order to monitor the physical condition of students, colleges and universities organize physical fitness tests every semester, so in the experimental analysis, the main reference data is the physical fitness test data of college students. Taking the Department of Mechanical and Electrical Engineering of Pujiang University as an example, this major has set up Baduanjin courses in the first semester of freshman and the first semester of sophomore, with 2 class hours per week. This study is mainly based on the data reported by the students of this major. Judging from the summary of physical test data in the first semester of freshman year, the pass rate of students in this major is 84.8%. After collecting the physical test data after the end of the first semester of sophomore year, the pass rate is 94.6% from the specific results. Compared with the data of the next semester, the overall situation of the students has improved. Moreover, in terms of specific physiological index data, such as pulmonary ventilation, heart rate, and muscle endurance, the data at the end of the first semester of the sophomore year is significantly better than that of the second semester of the freshman year. Based on the statistical results of the data, active participation in the Baduanjin practice can effectively improve the physiological index data of the students, so that the overall state of the students will be better.

Based on the in-depth and comprehensive analysis of Baduanjin exercises, its comprehensive influence on students is remarkable. As far as the current research results are concerned, its specific impact on students is manifested in the following aspects.

#### *2.2. The influence of Baduanjin on students*

The first is that Baduanjin has a significant impact on students' exercise habits and exercise concepts. Through interviews and surveys to understand students' basic views on sports, it is found that students who have received and practiced Baduanjin have better living habits and more correct sports concepts. A deeper analysis

found that the main reason why these students' living habits are healthier is that after practicing Baduanjin, their physical condition has undergone significant changes. Moreover, the exercise intensity of Baduanjin is not intense, and the requirements for the venue are not high, so it can be carried out anytime and anywhere.



**Figure 1.** Comparison of the physical test compliance rate of students in the 2019-2020 academic year and 2020-2021 academic year of the School of Mechanical and Electrical Engineering, Pujiang College, Nanjing University of Technology

The second is that Baduanjin has had a significant impact on students' health concepts. Through the survey, it is found that most of the contemporary college students do not have the correct concept of health. They think that they are relatively young, in good health, and in a very healthy state<sup>[4]</sup>. But judging from the data obtained from the test, most of the students are in a sub-healthy state. The occurrence of this situation has a significant relationship with students playing mobile phones, staying up late and surfing the Internet. The interview survey of the students who took the Baduanjin course found that their health concepts have changed significantly. When asked the reason, the students all said that since they participated in Tai Chi and Ba Duan Jin related courses and practiced, they found that their physical condition and mental state have improved significantly. Based on this improvement, they realized that exercise has nothing to do with age, and that exercise will make them look healthier overall.

The third is the impact of Baduanjin on students' physique. From the analysis of the physical measurement data of the freshman students in our school and the physical measurement data of the sophomore students in the following year, it can be seen that the physical data of the same group of students in the sophomore year are better than those in the freshman year [5]. In the case of other school factors being the same, the element that can have a significant impact on students' physical fitness data is physical education, and the main content of physical education for sophomore students is Baduanjin. This shows that actively participating in the practice of Baduanjin has significant significance for improving students' physical condition, and this positive effect is long-term.

### 3. Organization practice of health Qigong Baduanjin

Based on the specific analysis above, it can be seen that in the current organization of college students' physical education work, Baduanjin, as one of the main contents of Health Qigong, plays an important role in improving students' physiological indicators and optimizing their physique. In physical education, it is very necessary to actively promote Health Qigong courses. Based on the analysis of the current practice, in order for Health Qigong to play a positive role in the educational practice of college students, it is necessary to clarify the factors that affect Health Qigong, and to discuss the scientific design and organization of Health Qigong courses.

#### 3.1. Factors affecting health Qigong

Summarizing the whole teaching process of Baduanjin, we can see that in the promotion process of Baduanjin course, the main elements that can have a significant impact on the course effect are: (1) Curriculum arrangement and design. From a practical analysis point of view, the effective implementation of the Baduanjin course and its value play have a significant impact on the arrangement of class hours. If there are fewer class hours in teaching practice, students will not be able to fully learn the content of Baduanjin, and there will be

fewer exercises. The value of the course cannot be realized. (2) The standardization and standardization of teaching. For Baduanjin to play a positive role, it must emphasize the standard of movement, otherwise not only will it not achieve healthy effects, but it will cause sports injuries [6]. (3) Teacher factors. In course practice, teachers' professionalism and personal charm will affect students' views on specific courses, so it is necessary to strengthen teachers' personal cultivation and charisma in practice.

### *3.2. Strategies for organizing and implementing Baduanjin teaching*

After mastering the influencing elements of Baduanjin teaching, in order to give full play to the outstanding value of Baduanjin in improving students' physical fitness, the following strategies need to be adopted: (1) Reasonable curriculum arrangement and design are required [7]. Judging from the current analysis, in order to better integrate Baduanjin into students' fitness activities, it is not only necessary to arrange 2-4 class hours for professional teaching in weekly teaching, but also to arrange morning exercises or evening classes. Unified guided practice. When a good atmosphere for Baduanjin practice is formed on campus, students will participate in the practice independently, so that the overall value of Baduanjin will be significantly improved. (2) Emphasize the specialization and standardization of Baduanjin. In the process of implementing relevant courses, the teaching must be based on the standard Baduanjin, so that students can master the essentials of movements during practice, so as to ensure the standards and norms of movements. Under the influence of standard and standardized movements, the positive effects of Baduanjin practice will be brought into play [8]. (3) Emphasize the professionalism of teachers in the implementation of Baduanjin courses. Emphasize the professionalism of teachers to make their guidance to students more professional, so that the effect of relevant training will be more prominent. Strengthen the learning of Baduanjin theoretical knowledge and guide students to achieve the unity of knowledge and action. In this way, the health value of Baduanjin will be more prominent.

## **4. Conclusion**

To sum up, in order to keep students in a good state, to resist the pressure of study and future life, and to improve their physical fitness, health education should be actively emphasized in college students' education. Baduanjin has outstanding effects in shaping students' physical fitness and improving their psychological resistance to stress. In the teaching process of Baduanjin, through the analysis of students' physiological indicators and physical fitness optimization, and thinking about the specific implementation strategies of Baduanjin's professional teaching, this is of positive significance for the full play of Baduanjin's advantages in health promotion.

### **Author Contributions**

Wrote the literature review and checked the article, M.S.; collected data, processed empirical data, Z.SQ. presented empirical results, wrote the main part of the paper and proposed research conclusions, L YL. All of the authors read and agreed to the published the final manuscript.

### **Institutional Review Board Statement**

Not applicable.

### **Informed Consent Statement**

Not applicable.

### **Data Availability**

Statement

### **Conflicts of Interest**

The authors declare no conflict of interest.

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