

# Study on the mechanism of the overall evolution of Chinese students' physical health testing system

Xinbo Wu, Chunxia Lu\*

College of Physical Education, Hunan Normal University, Changsha 410012, China

**Abstract:** Physical health test plays an important role in students' physical health, since the reform and opening up, Chinese students' physical health test has entered the track of benign development, experienced the reform in 1975, 2002, 2007, and the partial revision in 1982, 1990, 2014. With the continuous reform and revision of physical fitness testing standards in the whole academic community, physical fitness testing standards have become a research hotspot in recent years. This review will study the evolution of the history of physical fitness testing system for Chinese students, influencing factors and existing problems.

**Key words:** physical health testing; Literature review

## 1. The historical evolution of Chinese students' physical health testing system

The level of physical health of Chinese teenagers is related to the development and future of the country. Although living standards are rising nowadays, according to the national physical health test data in recent years, the physical health level of Chinese teenagers is gradually declining. Therefore, to increase the physical health of young people, our country have promulgated many relevant regulations.

Since the 20th century, China has had different physical health testing systems in each period, and the test items are also adjusted and changed. Therefore, there are disputes on how to divide the overall development stage of physical health testing system and time division. Through the summary of the previous literature and objective statement, the students' physical health testing system in China can be divided into three stages.

### 1. Period of "Labor and Security System"

The earliest system health test in China can be traced back to 1912, when Tsinghua University was founded. In order to check the physique and health of students, China set up a series of tests including physical strength tests, medical health tests and body shape tests.

### 2. Period of "National Physical Exercise Standards"

The promulgation of the "National Physical exercise standards" means the birth of the first self-designated and implemented adolescent physical health testing system, and its formulation is the beginning of our country to explore the physical health testing system in line with China's national conditions. The most characteristic is the "labor system" standard method into a scoring method. The test results are divided into three levels, which are qualified, good, excellent. The advantage of this division is that the results can be quantified, the students' achievements can be evaluated, and the enthusiasm of students and teachers participating in tests can be greatly improved.

### 3. Period of "National Students' Physical Health Standards (2014 Revision)"

In 2002, the Ministry of Education and the General Administration of Sport of the State convened a large number of experts to negotiate, revise and promulgated the new National Physical Health Standards (Trial Plan), and finally determined the evaluation index system and the weight of the indicators. It was the first time that the word "health" was added to the physical fitness test, and the tests on health-related BMI, vital capacity and body forward flexion were added. In 2007, the National Physical Health Standard for Students was promulgated, which further put "health" in the first place and added physical qualities such as strength, speed and endurance, which are the indicators that can best reflect the physical health level of students. The National Students' Physical Health Standard (2014 Revision) promulgated in 2014 further streamlined the testing items, so that China's physical health testing system can be connected with the international physical health testing and evaluation system.

## 2. Influencing factors of physical health testing in China

### 1. Guidance of national policy lines

How China's physical health testing system changes? In fact, it is affected and restricted by national political factors, and it is the specific performance of national policy lines and educational guidelines. Since the reform and opening up, China has paid more and more attention to the development of school sports, accompanied by more and more policies to promote school sports.

### 2. Support of social and economic development

The great changes of the economic situation have laid the necessary material foundation for the development of school physical education. Physical health testing system have changed with the rapid development of China's economy, and the content gradually innovated and reformed. In order to match test sites and equipment reasonably, the relevant experts continue to revise and improve the system.

### 3. The promotion of educational reform

At the end of the 20th century, China issued the "Decision on Deepening Education Reform and Comprehensively Promoting Quality Education", which put forward "the strategy of all-round development of morality, intelligence, physical and beauty". Education reform affects the direction of student training, relatively speaking, it also promotes the development of our physical health testing needs.

### **3. The problems existing in the physical health test of Chinese students**

#### 1. Society, family and school ideological cognition of physical education is not enough

Since ancient times, our country advocates exam-oriented education, excessively puts intellectual education in the first place, and ignores students' aesthetic education and physical development. According to the original intention of the standard, it is to promote the importance of physical education and exercise in various schools through the ranking of the pass rate. However, school education deviates from the ideological cognition of attaching importance to physical education, and excessively pursues the rate of reaching the standard, which leads to the phenomenon of false reporting of school physical fitness test results. In addition, the family's views and opinions on physical education, the family members' support for physical activities and the degree of parents' self-exercise also affect the cultivation of students' awareness of physical exercise. The unscientific way of family rearing makes parents not aware of the great significance of sticking to exercise for the healthy growth of students.

#### 2. Distortion of physical fitness test results

There is an imbalance in the development of China's regions, and it is impossible to ensure that the instruments and equipment in various regions can be more advanced. The more developed areas have advanced testing instruments, which can be fully automatic electric meters and reduce a lot of operating errors. However remote areas can only use the original measurements. Therefore, due to the failure of the test instrument, the unprofessionalism of the test personnel, and the non-standard control of the test process, there will be deviations in the test results.

#### 3. Lack of linkage mechanism of physical fitness test

Previous investigations have found that the physical fitness test requires the coordination and cooperation of multiple departments. For example, in order to complete the physical fitness test in a concentrated period, the Academic Affairs Office needs to deploy courses, the Student Affairs Department propagandizes the importance of physical fitness test, and the financial department reports the relevant funds. However, when physical fitness testing is carried out, the role of the physical education department is very passive, and other departments are not very active in participating, which will also affect the whole process of physical fitness testing.

#### 4. The implementation of the Standard does not play an incentive function

The "Standards" should be combined with school physical education and daily physical activities, through physical health tests to encourage students to participate in physical exercise, increase the amount of physical activity and help students maintain a healthy lifestyle. However, they can't reach the standard no matter how much effort and practice they have made in real life, which blames to their native physical conditions. As a result, self-confidence would be frustrated, and students' enthusiasm to carry out physical exercise would decline.

#### 5. The lack of selectivity in test items limits students' specialties

Each index in the standard can be replaced to a certain extent, because students are given the option to choose test items independently. For example, a shot putter with excellent strength but poor performance in pull-ups, then the test should not measure strength.

### **4. Countermeasures and suggestions for improving measures of physical health testing in Chinese schools**

The solution of students' physical health problems needs the attention of school leaders. Only when leaders pay enough attention to physical fitness testing can they guarantee manpower, materials and equipment. Therefore, it is necessary to formulate necessary regulations at the level of the Ministry of Education to include physical health testing into the assessment objectives of school leaders. However, the fundamental problem is whether students can spontaneously develop scientific and reasonable sports habits. This problem is still the core issue that has plagued the school sports field in recent decades, and it is also a problem that has been seriously ignored by the sports academic community. In spite of this, the physical health test work included in the school leadership assessment objectives can greatly promote the development of physical health work.

What's more? completing the physical health test organized by the Ministry of Education every school year, physical health monitoring should also be established in terms of semester, and a small range of random tests should be carried out every semester to ensure students' physical health level. The purpose is to increase the experience of instrument operation, so that there will be no personnel operation technical problems in the annual test. In addition, when it is found that the test scores of students in a certain item have slipped, targeted teaching can be carried out in the next semester to improve the final test scores of the year.

PE teachers must adhere to professional ethics and report the real data to the Ministry of Education, so as to fundamentally attract the attention of the senior officials of the Ministry of Education and school leaders at all levels, so as to guide relevant leaders to take practical actions to change the current situation of school PE. However, depending on physical education teachers alone cannot guarantee students' physical health.

To emphasize the importance of students' physical health test is to urge schools, teachers and students to pay attention to daily physical exercise. Relevant departments should not require all registered students to complete physical health tests within a specified time by way of administrative orders, but should conduct spot checks and supervision for different regions, different schools and different students. The physical health test of students is not only for the data collection of related indicators. But we should pay attention to the relevant work before, during and after the physical health test of students. Before the test, we should educate students on the relevant knowledge, skills and methods of the test content, so that students can learn and master the necessary sports, test and health knowledge and ability.

During the test, the site, equipment and operation process should be in line with the standards as far as possible, and students should have sufficient preparation time to participate in and complete the test, so as to ensure the collection of real and effective physical health data. The evaluation and intervention after the test should be scientific and reasonable, and the evaluation criteria should consider congenital factors and acquired factors, such as height and weight, should be judged by reference standards as far as possible, and it will be unfair and rational to rely too much on the standard score of norms.

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**About the author:** Wu Xinbo (1999~), student, Master. Research interests: Physical education teaching, sports psychology, Physical health.

**Corresponding author:** Lu Chunxia (1978~), Associate Professor, PhD. Research interests: Exercise intervention; Immune stress and mental health.

**Address:** Physical Education College, Hunan Normal University, 437 Lushan South Road, Yuelu District, Changsha City, Hunan Province, 410012, China