



# Research on Public Sports and Health Literacy Education in Universities in the Post-epidemic Era

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**Abstract.** Due to the large-scale spread of the new coronavirus, all industries in my country have been greatly affected, and my country has gradually entered the “post-epidemic era”. Public physical education and health literacy education in colleges and universities are issues that need to be paid attention to. This article expounds the theory of health literacy and social needs. According to the survey data released by the Health Education Center of the Ministry of Health in 2021, the overall level of health literacy of Chinese residents has only reached 21.56%, and it will be no less than 22% in 2022. Physical education is an indispensable part of college curriculum. Colleges and universities can combine health education with physical education to publicize the importance of health literacy education.

**Keywords:** Post-epidemic era · public physical education in universities · health literacy education

## 1 Introduction

The implementation of public physical education courses in colleges and universities is one of the important ways to cultivate talents for all-round development. From the perspective of health literacy education, understanding the current situation of public sports in colleges and universities is conducive to improving the shortcomings of current physical education classes and promoting the all-round development of talents in colleges and universities.

## 2 The Significance of Developing Physical Health Education in the Post-epidemic Era

The epidemic caused by the new coronavirus has swept everyone’s life, and everyone is working hard to win this battle. So far, there are still many confirmed cases with symptoms or asymptomatic across the country, but the epidemic situation in Europe and the United States and other countries is still difficult to contain. Cases, so domestic outbreaks will still recur [1].

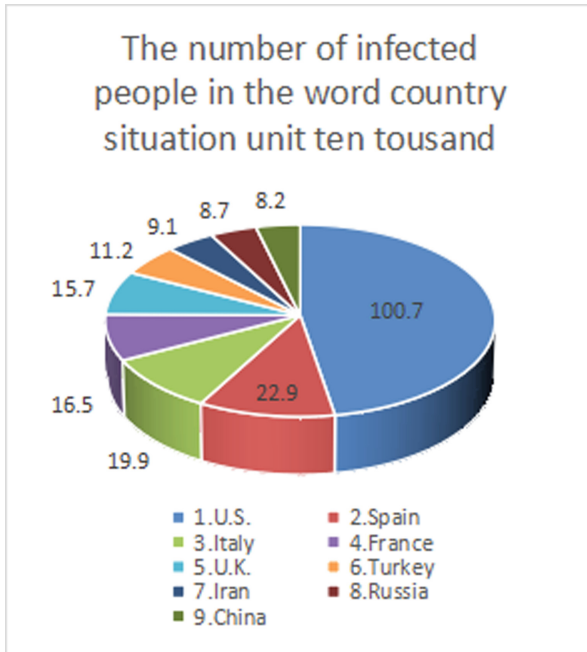


Fig. 1. Epidemic data graph Data source: Internet (2022.5.26)

The post-epidemic era does not mean the stage when the epidemic completely disappears and the social environment fully recovers, but refers to the era when the epidemic may break out in a small area at any time and still have an adverse impact on all aspects of society. In the outline of “Healthy China 2030”, health literacy education is included in the national education system, which fully reflects the country’s emphasis on national health. The concept of college education in the new era has gradually become “integration of sports and education” and “healthy development”, and the importance of college health education is self-evident. In this context, universities, middle schools and primary schools in all regions of our country need to change the concept of physical education, promote the healthy development of students’ physical and mental health, and strengthen the public physical education work in schools.

Since the large-scale resumption of offline courses in schools in our country, college students have gradually begun to return to school, which will bring many new challenges to the school’s educational activities. First, the return of college students from all over the country will lead to a nationwide flow of personnel, and there are serious problems. Risk of infection. As the carrier of education, schools have the responsibility and obligation to impart knowledge of sports and health to students. Under the general trend of epidemic prevention and control, schools need to carry out education on the prevention of new coronary pneumonia for students of all grades, so that students can understand the measures to prevent normative infectious diseases. Master the knowledge of pathogenic sources, transmission methods and hazards related to it, and understand basic self-protection skills [2].

**Table 1.** Advantages and disadvantages of different education methods

education method	Advantage	disadvantage
offline education	Facilitate interaction between teachers and students	It is difficult to avoid gathering during the epidemic
online education	Avoid crowd gathering and reduce the probability of epidemic infection	low learning efficiency

### 3 Measures to Develop Physical Health Education in the Post-epidemic Era

#### 3.1 Combining Online and Offline Teaching Mode to Carry Out Education

During the most serious period of the epidemic, many colleges and universities opened many online courses to teach in response to the call of the Ministry of Education to “suspend classes without stopping learning” and “suspending classes without stopping teaching”. It is still insufficient, resulting in many “rollovers”. The reason is that the current traditional education model lacks the characteristics of informatization and networking. Although online teaching has many shortcomings, there are also advantages that offline education does not have.

For offline education, the advantage is that teachers and students are in a unified space, and the communication and contact between teachers and students can be more intuitive and convenient. Teachers can interact with students in the course of teaching to understand students’ mastery of knowledge, so as to adjust their own rhythm and teaching methods. And the offline teaching method is more conducive to increasing the concentration of students’ learning. For online education, the biggest advantage is that it is not affected and constrained by time and space, and can teach anytime, anywhere. In today’s raging environment, it can effectively prevent crowds from gathering and reduce the spread of the epidemic. Therefore, online education The educational method of teaching is irreplaceable during the severe epidemic period, and students can also watch the course repeatedly after class to deepen and consolidate their knowledge [3].

Therefore, at this stage, it is necessary to establish a complete online education system. Through teachers’ planned teaching, students can master basic health and epidemic prevention knowledge. At the same time, teachers need to be trained in professional epidemic prevention knowledge, so that teachers and students can jointly develop good living habits. Thereby enhancing the self-defense ability.

Epidemic prevention in the post-epidemic era still cannot be taken lightly. According to the SIR model formula for epidemics, the main mode of infection of the new coronary pneumonia is person-to-person communication; the immunity between individuals is the same, and the total population of each country is divided into three Types: susceptible population S, infected population I, cured and dead population R, the conclusion is drawn by the following formula

$$dS/dt = -r\beta US/N \tag{1}$$

$$dI/dt = r\beta/N - \mu I \quad (2)$$

$$dR/dt = \mu I \quad (3)$$

where  $r$  is the number of people in contact with an infected population;  $\beta$  is the infection rate;  $\mu$  is the dropout rate. By comparing the above SIR model, a new model can be derived that includes population density, temperature, and humidity to control the intensity of the new crown infection. Defined as follows

$$dR/dt = \mu I \quad (4)$$

It can be seen that temperature and the content of NO<sub>2</sub> in the air are important indicators for predicting new coronary pneumonia. When the temperature is between 5 and 15°C, the spread of COVID-19 is the fastest. Secondly, satellite observation of NO<sub>2</sub> content can be used to reflect the implementation of national governments and restrictions. When NO<sub>2</sub> decreases, it means that the traffic volume is greatly reduced, and interpersonal communication is common reduce.

In order to introduce the effects of temperature, humidity and government control measures, it is assumed that

$$\beta = \beta_0 + \beta_1 F_1(T_{2m}) + \beta_2 F_2(RH_{2m}) \quad (5)$$

$$\mu = \mu_0 + \mu_C F_3(cNO_2) \quad (6)$$

Among them, and are the functional relationships of local air temperature, relative humidity and the number of newly diagnosed patients per day,  $2m$  in the range of 5–15; is the rate of change of local concentration, which can reflect the strictness of local isolation measures. Strict isolation measures help reduce crowd gathering and the probability of infection.

From the above formula, it can be concluded that avoiding crowd gathering is the top priority of epidemic prevention work. Therefore, teachers can use online teaching to reduce gatherings in the teaching of public sports theory. For sports courses that require practical exercises, offline teaching can be adopted, but it is necessary to pay attention to making students wear masks, keep a distance, and ensure that they study in ventilated conditions. From this, it can be concluded that the education model combining online and offline is more suitable for colleges and universities to carry out public sports health education in the post-epidemic era.

### 3.2 Carry Out Health Education on Epidemic Prevention

In the post-epidemic era, the epidemic will not disappear, but it may break out at any time. Therefore, it is necessary to carry out special health education for the prevention of new coronary pneumonia. Colleges and universities should always remind students to pay attention to new coronary pneumonia in daily public physical education, remind students to develop a healthy life and rest. Be careful not to get infected with the new coronavirus.

The characteristics of the new crown pneumonia virus are the characteristics of fast transmission, any outbreak, asymptomatic infection and low fatality rate. Therefore, when carrying out epidemic prevention education, schools should pay attention to letting teachers explain the basic characteristics of the epidemic to students based on their actual experience during the epidemic., so that students can understand the principle of contagion, guide them to deal with the epidemic situation reasonably, and enhance their ability to cope with pressure. For example, if you feel feverish, you should take the initiative to report to the teacher and conduct self-isolation; do not gather during meals and eat at separate tables; develop good habits of wearing masks and washing hands frequently, etc.

Only by doing a good job in epidemic prevention and research in daily life can we avoid the adverse impact of the epidemic on people's lives as much as possible. While carrying out public physical education, schools also need to pay attention to the cultivation of students' own immunity and attach importance to scientific fitness knowledge. Schools not only need to improve students' motor skills, but also need to help students understand scientific fitness knowledge, so that students can improve their own immunity through scientific fitness methods [4].

People of all ages can get new coronary pneumonia. But according to research, most infected people are adults, with the elderly and infirm more likely to be infected. Therefore, in order to prevent new coronary pneumonia, people need to do scientific fitness exercises to improve their immunity.

## 4 Conclusion

In this battle against the new crown pneumonia, we have achieved a lot of victory, and major universities across the country should seize the opportunity to combine public sports and health literacy education in colleges and universities to improve students' health awareness and physical immunity. As a teacher, in the context of the epidemic environment, not only should we do our job of teaching and educating people, but also focus on the physical education and health education of students in the epidemic environment.

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