

# Research on the improvement path of physical health of young people in Sichuan Province under the perspective of digital sports

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## Abstract

The "Outline for Building a Sports Powerhouse" sets the goal of fully establishing a modern socialist sports powerhouse by 2050, with enhancing the physical health of young people being key to achieving this goal. As a populous province, Sichuan's youth not only influence personal growth but also relate to the region's future competitiveness. However, Sichuan's youth face issues such as rising obesity rates, high incidence of myopia, and deficiencies in endurance and strength. Digital sports, by integrating traditional sports education with digital technology, offer new solutions to these problems. This article analyzes the current state of physical health among Sichuan's youth from a digital sports perspective and explores pathways to improve their physical health through measures such as strengthening physical exercise, promoting digital sports guidance and management, establishing a digital incentive system, and enhancing the digital literacy of young people. These measures not only help improve the physical health of Sichuan's youth but also provide valuable experiences for other regions.

## Keywords

Digital sports; Sichuan Province; adolescent physical health; improvement path.

## 1. Introduction

The Outline for Building a Sports Powerhouse points out that by 2050, a fully developed socialist modern sports powerhouse will be established. Enhancing the physical health of young people and promoting their healthy growth is crucial to achieving the goal of building a sports powerhouse and a healthy China, as well as deepening reforms in the sports sector. The physical health of young people is an essential component of national fitness, directly impacting national development. As the future of the country and the hope of the nation, the physical health of young people has always been a matter of great concern. Sichuan Province, with its large population, has a significant youth demographic. Their physical health not only affects personal growth and development but also relates to the future competitiveness of the entire region. However, issues concerning the physical health of young people in Sichuan Province are widespread, including rising obesity rates, persistently high myopia rates, and insufficient endurance and strength. In the current era of global digitalization, the sports industry is undergoing profound changes, and digital sports have emerged, injecting new vitality into traditional sports. Digital sports for young people refer to a new form of sports education that integrates traditional sports education with digital technology, using data from sports activities to empower participation, skill acquisition, and sports protection. Its advantages lie in more effectively helping young people develop good physical health, precisely cultivating personalized sports skills, and scientifically improving individual health management capabilities and fostering teamwork among teenagers through an educational and entertaining approach is

essential. Establishing aesthetic and value perspectives for the digital age is also crucial. Therefore, exploring pathways to enhance the physical health of young people in Sichuan Province from the perspective of digital sports holds significant practical importance. This not only leverages the advantages of digital technology to accurately address existing issues in youth physical health but also provides valuable examples for other regions across the country, promoting the advancement of youth sports in China to new heights.

## **2. Analysis of the physical health status of adolescents in Sichuan Province**

According to the eighth national survey report on the physical health status of young people released by the General Administration of Sport of China, the physical health level of young people in Sichuan Province is relatively low. The survey results show that the overall physical health status of primary and secondary school students in Sichuan Province is poor, with a low proportion of good and excellent conditions. Obesity, respiratory, and cardiovascular functions continue to decline, placing a burden on social healthcare and fiscal investment, affecting the sustainable development of our province. At the same time, there is still a clear dual structure characteristic in the physical health issues among young people between urban and rural areas. For a long time, primary and secondary schools have lacked standardized physical education courses and exercise facilities. Students bear heavy academic burdens and lack opportunities for outdoor activities and physical exercise, leading to a decline in physical health status. Additionally, young people in Sichuan Province generally have an unbalanced diet, consuming too much fat, sugar, and salt, which leads to an increase in obesity and other health problems[1]. The eighth national survey on the physical health status of young people shows that the obesity rate among primary and secondary school students in Sichuan Province exceeds the national average. In summary, unhealthy behaviors and lifestyles (lack of physical exercise, high-fat diets) have become one of the important reasons for the decline in the physical health of young people. Social governance of youth physical health has become an important trend in our province.

In recent years, Sichuan Province has actively promoted the improvement of physical activities and health levels among young people through a series of policies and measures. According to data released by the Sichuan Provincial Sports Bureau, more than 20 million people in Sichuan regularly participate in exercise, and per capita sports consumption has also significantly increased, indicating a growing emphasis on youth sports in society. Additionally, the Sichuan Provincial Department of Education has further improved students health by ensuring that primary and secondary school students engage in at least two hours of comprehensive physical activity daily. Despite these improvements, the physical health of young people in Sichuan still faces several issues, such as severe problems like overweight, obesity, and early onset of myopia. Moreover, health issues like scoliosis and lumbar disc herniation are on the rise, which are directly related to insufficient physical exercise. In particular, in ethnic minority areas, there are some problems with the physical health of children and adolescents. These issues include the lack of policy control, uneven development of educational resources, unclear and monolithic curriculum settings in primary and secondary schools, as well as overnutrition and decreased willpower, all of which contribute to a decline in physical fitness.

### **3. Research on the path of improving physical health of adolescents through digital sports**

#### **3.1. Strengthen physical exercise for teenagers**

In the context of digital sports, enhancing the physical health of young people in Sichuan Province first requires building a comprehensive support system from three aspects: family, school, and community. In families, parents should actively set an example by participating in sports activities with their children and stimulate the child's interest through joint outdoor activities or fitness exercises [2]. At the school level, the importance of strengthening physical education courses is not only reflected in increasing class hours but also in enriching course content. This includes traditional sports such as basketball, football, and track and field, as well as emerging sports like rock climbing and skateboarding, to meet the diverse interests of students. Additionally, regular school or inter-school sports meets should be organized to provide opportunities for students to showcase themselves and develop teamwork skills, enhancing their competitive spirit and sense of collective honor. In the community, as an important venue for extracurricular activities, various sports clubs and interest groups should be actively organized, encouraging young people to step out of their homes and participate in a variety of sports activities. This can not only improve the physical fitness of young people but also promote the development of their social skills. The government and all sectors of society should also increase investment in the construction of sports facilities for young people, ensuring that every community has sufficient public sports facilities for use, such as swimming pools, basketball courts, and badminton courts. At the same time, specialized facilities designed for the characteristics of young people should be provided. Training programs are critical, taking into account the physical development of adolescents and avoiding overtraining that can lead to injury.

#### **3.2. Promote digital sports guidance and management**

With the development of information technology, it has become particularly important to promote digital methods in sports guidance and management in Sichuan Province. Smart wearable devices such as fitness bands and smartwatches can monitor data like heart rate, steps taken, and calories burned in real time for young people, synchronizing this information to mobile apps to help both young people and their parents understand their daily activity levels and health status. Based on big data analysis, the system can also recommend the optimal exercise intensity and type suitable for the current physical condition of young people. Online video tutorials break down barriers of time and space, allowing young people in Sichuan Province to learn correct movement postures and technical points from professional coaches at home. This is especially true for sports with higher skill requirements, such as yoga and dance, where high-definition video tutorials enable learners to watch and practice repeatedly until they fully master the techniques. The application of virtual reality (VR) and augmented reality (AR) technologies has also brought new immersive exercise experiences to young people, enabling them to complete exercises of a certain intensity unconsciously during play. In terms of sports management, digital platforms can help schools and parents in Sichuan Province better track the progress of young people's sports activities. Teachers can assign homework and monitor student completion through online platforms, making timely adjustments to teaching methods. Strategy; parents can check their children's exercise records at any time and give necessary support and encouragement. With the help of cloud computing technology, all relevant data can be stored safely in the cloud, which is convenient for long-term tracking and analysis, so as to find potential problems and take corresponding measures.

### 3.3. Establish a digital incentive system

To further ignite the enthusiasm of young people in Sichuan Province for participating in sports activities, it is particularly crucial to establish an effective digital incentive mechanism. For example, using a points reward system to encourage young people to actively engage in various forms of physical exercise. Each time they complete a specified task, they can earn a certain number of points. These points can be redeemed for physical prizes such as sports equipment and books, or used to unlock more advanced challenge projects or virtual badges, thereby enhancing the sense of achievement among participants.

The integration of social media is also a key factor in building incentive mechanisms. Teenagers in Sichuan Province often have a strong interest in social platforms, so they can set up dedicated sports communities or challenges to share their achievements, experiences, and feelings on these platforms, interacting and exchanging with other members. By implementing ranking functions to showcase outstanding users, a healthy competitive atmosphere can be formed, encouraging more people to join the ranks of exercisers.

Developing mobile applications using gamification design concepts is also an effective approach. These apps typically incorporate elements such as storylines and role-playing, allowing users to engage in substantial physical activity while playing [3]. For example, certain running apps simulate an adventure journey where players must keep running to evade pursuers or find treasures. This method significantly enhances the enjoyment of sports for young people in Sichuan Province.

### 3.4. Enhance digital literacy education for young people

In today's information society, enhancing the digital literacy of young people in Sichuan Province has become an indispensable part. Schools should offer specialized digital literacy courses to teach students basic programming knowledge, cybersecurity basics, and data analysis methods. Through case studies, students should understand the importance of personal information protection, learn to identify false information online, and avoid falling victim to scams or other negative impacts.

In addition to classroom teaching, the design of practical components should also be emphasized. Organize students to participate in various science and technology competitions, innovation projects, and other activities, giving them the opportunity to apply their knowledge to solve real-world problems. For example, launch a "Smart Campus" construction project, encouraging students to propose creative solutions for improving the campus environment and optimizing learning processes, and try to convert these ideas into concrete applications using programming languages. This not only enhances students' hands-on skills but also fosters teamwork and innovation.

The family also plays a crucial role in cultivating digital literacy among teenagers. Parents should take the initiative to guide their children to use the internet properly and engage together in discussing the rules and moral norms of the online world. At the same time, they must pay attention to their children's online behavior to prevent addiction to online games or exposure to harmful content. The government and social organizations should also strengthen regulatory efforts on the online environment, establish and improve laws and regulations, and create a healthy and positive space for the growth of young people in Sichuan Province. Through the joint efforts of all parties, we can comprehensively enhance the digital literacy level of young people, laying a solid foundation for their future development.

## 4. Conclusion

The improvement of physical health among young people in Sichuan Province is not only an essential part of the national strategy for building a sports powerhouse and a healthy China, but

also a key to promoting their all-round development. In response to the existing issues in physical health, a series of practical solutions have been proposed, leveraging the advantages of digital sports. These include building support systems through collaboration among families, schools, and communities, promoting digital methods for sports guidance and management, establishing effective digital incentive mechanisms, and enhancing digital literacy education for young people. These measures aim to ignite enthusiasm for sports activities among young people, improve their physical fitness, and enhance their personal health management skills. Furthermore, through these efforts, Sichuan Province can not only effectively boost the physical health levels of young people in its region but also provide valuable experience for other regions across the country, driving the development of youth sports in China to new heights. Therefore, continuous attention and support for the development of digital sports are of great significance for the healthy growth of young people in Sichuan Province and even nationwide.

## Acknowledgements

Supported by The Innovation Fund of Postgraduate, Sichuan University of Science & Engineering.

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