

Research on the Effect of Football Activities on Students' Mental Health Quality in Schoolyard

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Abstract: this study takes the greater part of school children as the research object, through the comparison and analysis of elementary student physical health survey in 2014 and 2015 to analyze students' physical quality development after the schoolyard football, understand football influence on student's physical quality, including the overall level of all student physical health situation analysis, body shape, speed, endurance and lung capacity level of individual case analysis. The data of systematic football training and students who did not participate in football training were compared and the interference of irrelevant variables (such as natural growth) was excluded. The research also compares the psychological quality of students who take part in systematic football training and those who do not take part in football training, so as to further confirm the impact of schoolyard football on students' cognition, personality and adaptability.

1. Introduction

1.1 The Call of the Times for Physical and Mental Health Talents

We are in an era of political multi-polarization and economic globalization. An era of internationalization and informatization; a time when scientific spirit and humanistic spirit are integrated; an age of rapid change, great tide, and great speed. An era of inheritance, sublation and innovation; an era of competition, opportunity, pressure and challenge; an era of the comprehensive rejuvenation of the chinese nation. This era needs people with sound mind and body, which is the call of the times. [1] the outline of the national medium - and long-term education reform and development plan (2010-2020) points out that talent is the first resource for china's economic and social development, and clearly proposes that china should transform from a big country in human resources to a strong country in human resources. It fully reflects that the competition of economy, science and technology and comprehensive national strength in the new century is the competition of talents in the final analysis.

It has been reported that more than half of the population in china is in a state of sub-health (severe imbalance of body and mind), and over 60% of the adults in the world are not exercising enough. However, the physical health of teenagers is not optimistic. The teenagers, who own the rising sun and the symbol of vitality, are also in the negative burden of study. A strong youth makes a strong country. A weak constitution makes no bones. To promote the physical and mental health of young people and their physical and mental health, as well as their physical and mental health, as well as the future and destiny of the country, we need to start from the concept of "health first". The construction of the country in all aspects is supported by generations of handsome talents with good physique and quick thinking, rather than the disease of weakness. Teenagers should have the historical responsibility of strengthening and exercising to better serve the society and the country. However, physical and mental health is the foundation of people's all-round development and the guarantee of a country's talent competition. Therefore, this era is in urgent need of physical and mental health talent.

1.2 Social Development Puts Forward New Requirements on Adolescent Health

In recent years, the sunshine sports movement of hundreds of millions of students across the country has set off a boom in schoolyard physical exercise. However, the problem of "insufficiency

of physical exercise” among young people is still prominent. Six national surveys on adolescent physical health conducted in China showed that the endurance quality of young students continued to decline in the past 25 years, with a gradual decline in speed, explosive power and strength quality. [2] At the same time, the detection rate of overweight and obesity among young students was increasing, which was more serious in metropolises. Meanwhile, the height, weight and chest circumference of Chinese urban and rural students continue to show an increasing trend. It shows poor quality development and good form development. For example, according to the latest results of physical fitness monitoring, the height of urban male students, urban female students, rural male students and rural female students in the 7-18 age group increased by 1.01, 0.79, 1.55 and 1.12 cm on average, the weight increased by 1.35, 0.80, 2.02 and 1.15 kg on average, and the chest circumference increased by 0.71, 0.59, 1.26 and 0.94 cm on average, respectively, compared with 2005. According to experts, “the chest size of Chinese teenagers is getting wider, but the lung capacity is getting smaller. Taller and taller, slower and slower; the more you weigh, the less you have. Appear “good figure, poor constitution” contradiction, make our country youth appears “outside strong in stem”.

For the decline of adolescent physical health, the analysis is the result of the joint action of various factors. Its cause is: individual factor, social factor, education factor, management factor and so on. However, the main reason lies in the deviation of teenagers' consciousness of physical exercise and the serious lack of intensity of daily exercise. Among them, the body quality evaluation system is not perfect also has a great relationship. A recent in 8 cities in China (6) of the investigation of the status quo of the juvenile extracurricular physical exercise found in Shanghai urban youth awareness of the importance of extracurricular physical exercise had a higher degree, to exercise at the same time to master and use teenagers is better than other city, but on to take an active part in extracurricular physical exercise is the worst. It can be found that the underlying cause of this phenomenon is school, family and society. In particular, the phenomenon of “knowledge and practice conflict” is common among students, and they cannot form good exercise habits.

2. Overview of Football Activities

2.1 Overview of Youth Schoolyard Football Activities

2.1.1 Background of Youth Schoolyard Football Activities

Football is the world's largest sport, football sports in the majority of young people have a broad foundation, by the students love. The development of youth football is related to the development of a country's football level. Youth football is the foundation of a national football sport. Only by paying attention to the development of youth football can the national football level be improved.

The survey shows that the height, weight and chest circumference of Chinese teenagers have increased, but the systematic indexes such as muscle strength, explosive power and endurance have declined continuously, some of them even declined for 20 years. The physical health of adolescents is even more worrying. In Beijing, for example, a significant number of students do less than one hour of exercise a day, and youth obesity rates are now among the highest in the country. According to the survey of physical health of Shanghai students this year, compared with 2005, the strength quality (grip strength) of Shanghai students and endurance quality of female students are both declining. Compared with our neighbors, Japan and South Korea, the physical fitness of teenagers in Japan and South Korea has been on the rise for 15 years. Football, as a sport to strengthen the body and keep fit, has a wide influence in the youth.

In recent years, the men's and women's national teams failed to achieve good results in the World Series, and the fake illegal gambling in football has been exposed constantly, which has attracted the attention of the masses. While people deplore football, they also hope that the country can reform it. At present, the Chinese football has caused the central leadership attaches great importance to, on October 12, 2009, is a German official visit of Chinese vice President Xi Jinping, during a visit to Germany's Bayer group co., LTD., said he liked football, and points out that China has a considerable football fans and the world market, but the level is lower, hope you can catch up.

“After the Olympics, China made up its mind that since we can win gold MEDALS in other sports, football should make up its mind, but it will take a long time,” he said. On October 14, state councilor Liu Yandong, stressed that football is one of the most popular with the masses movement, “we want to the state and the people's highly responsible attitude, summary of the experiences and lessons of football development, find the crux of hinder the development of China's football, and promptly put forward in accordance with the situation of football sports reform and development of ideas and measures to constantly improve the level of our country soccer movement development”. On October 16, President hu Jintao met with representatives of elite athletes and stressed the importance of improving football. The national leaders have made a series of important instructions to the football game, indicating that the country has attached great importance to the development of the football game in our country and is determined to push the football game in our country.

2.1.2 Role of Youth Schoolyard Football Activities

The healthy growth of teenagers concerns the future of the country and the nation. Schoolyard football activities can attract the majority of young students to the playground, into the nature, into the sun, actively participate in physical exercise, and effectively improve the physical health of students. Take part in football sports can develop enterprising, unity, hard work and strong and brave willpower, a good athlete should not only possess the will quality, in the competition and training thinking ability and judge decisions in a timely manner, football also needs to have the psychological ability, so teenager's long-term soccer movement carried out for the shaping of the mental health education, will quality have greatly promoted role. [6] At present, our country youth soccer reserve talented person is extremely exhausted, plays the football child fewer and fewer, causes to have no talented person to be able to choose, directly affected our country soccer movement development. Schoolyard football activities bring football to schoolyard and form a talent cultivation system based on school and combining physical education, which enables more and more teenagers to participate in football sports and expands the football population, which plays an important role in the selection of future athletes.

2.2 Classification of Schoolyard Football Teaching under the Background of Youth School Football

There are many technical and tactical elements in football teaching content. If these professional technical and tactical contents are directly introduced into middle school PE classes, the general teaching effect will not be ideal. In general, the teaching content of football mainly includes the basic theoretical knowledge, sports skills and game tactics of football. To make middle school students can easy to learn and master, we should according to the teaching objects of different age and the teaching goal, choose different teaching content, suitable for middle school students to learn football skills will be a football game on facilitation and gaming transformation, so that the students in football teaching can experience the happiness and a sense of achievement, realize teenagers the schoolyard football activities of sunshine sports, happy football philosophy.

2.2.1 Teaching Content of Football Technology

Football technical action is the main content of teaching. It includes kick technique, catch technique, overhead ball technique, and dribble passing technique and so on. In the context of teenage school football activities, the teaching contents of middle school football technology should focus on the basic skills easily mastered by middle school students, and emphasize the standardization of movements in the teaching process, so that students can lay a foundation for the improvement of football technology in the future. As shown in Figure 1.

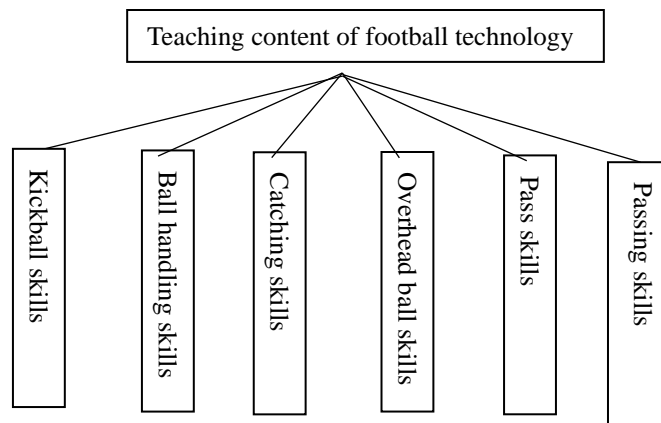


Fig 1. Content classification of football technology teaching

2.2.2 Teaching Content of Football Tactics

Football is a team sport, which requires coordination and cooperation with teammates to achieve the goal. Therefore, the teaching of soccer tactics is also the focus of middle school football teaching under the background of youth school football. Usually, the main content of football tactics teaching includes football attack tactics and football defense tactics. Among them, the football attack technology also includes the individual, the local and the whole three attack and defense tactics. In addition, football game formation and formation, set-piece tactics and other tactics, is also a part of football tactics teaching. Considering the students' ability to understand and accept and physical qualities, the teaching content of football tactics should choose the individual and local attack and defense tactics that can be understood and used by students through simple training.

3. Influence of Schoolyard Football on Students' Mental Health Quality

3.1 Influence of Schoolyard Football on Students' Cognitive Development

Cognitive ability refers to the ability of human brain to process and store information to extract, that is, people's ability to grasp the composition and performance of things, the relationship with other things, the power of development, the direction of development and the basic rules. Childhood is a critical period for the development of cognitive ability. If it is not developed in time, its learning ability will decline. Studies have shown that physical exercise is an effective way to improve cognitive ability. Theory and cognition is formed through the body's experience, and cognitive thinkers advocated thinking and cognitive is largely dependent on and began in the body, the body structure, the structure of nerve, sensory and motor system operates determines how do we know the world, determines our thinking style, shape the way we see the world. How and how the cognitive process works is actually determined by the physical properties of the body. Cognitive content is also provided by the body. Therefore, it can be seen that there is a theoretical and practical basis to promote children's cognitive development through sports, and coordination of different parts in sports is more conducive to the development of cognitive ability. The cognitive quality scale includes two dimensions of metacognition and creativity. Metacognition refers to the individual's knowledge and monitoring of their own cognitive activities. Creativity refers to the individual's imagination and divergent thinking ability.

The American psychologist fravel defined metacognition as the recognition and monitoring of one's own thinking and learning activities. At its core is cognition. Combined with the practice of sports, students often show that they know how to use the learned and mastered sports skills, knowledge, principles, etc., and summarize the general rules, so that they can achieve self-regulation and control of learning methods and means in later learning, and finally achieve certain expected goals. It can be seen from the "metacognitive" project difference table (as shown in table 1): the students participating in football are better than those participating in badminton project and those not participating in any sports project in the metacognitive strategy ability. After

the t-test P value in the statistical software SPSS is between 0.05 and 0.001, there is a significant difference between the three. The students in badminton had no significant difference in their metacognitive strategy ability compared with those who did not participate in any sports program. After the t-test $P > 0.05$ in the statistical software SPSS.

Table 1 Analysis of differences in metacognitive indicators among students who participated in football training, students who participated in badminton training and students who did not participate in training

Psychological dimension	Group	Sample qty	Average	Standard deviation	P
Metacognitive	Football	248	16.25	2.96	
	Badminton	248	15.88	3.44	0.004
	Football	248	16.25	2.96	
	No exercise	248	13.59	3.92	0
	Badminton	248	15.88	3.44	
	No exercise	248	13.59	3.92	0.167

According to the difference table of “metacognitive” items, the students who participated in the football program had better metacognitive strategies than those who participated in the badminton program and those who did not participate in any sports program. At present, the existing research shows that, the football as the first great modern sports, it requires high tactical and strategic thinking to control the rhythm of the game have played an important role greatly support, at the same time because of the football high confrontation and collaboration requirements of the project itself, individual athletes often adopted in the process of game to the real-time self-adjusting, rhythm control, game atmosphere actively adapt to have inseparable relationship. Because the badminton sport itself does not have the nature of the football project characteristic, and belongs to the “grid” sports, greatly extent reduced the badminton athletes antagonistic, so the badminton players in metacognitive learning strategies has taken a different way than that of the soccer program students, usually in combination with badminton project itself of rapid response, high speed, strong outbreak of the features of cognition, monitor and adjust again. Also, did not participate in any sports students and students participate in badminton sport also has a part in soccer program students can realize the high confrontation and cooperation, positive sense of tactical thinking, so before in amateur study life between metacognitive learning strategies and methods have produced by similarity, also helps to explain why there was no significant difference between the P values.

Table 2 Analysis of Differences in Creative Indicators among Students Participating in Football Training, Students Participating in Badminton Training and Students Not Participating in Training

Psychological dimension	Group	Sample qty	Average	Standard deviation	P
Creativity	Football	248	15.19	3.3	
	Badminton	248	14.84	3.94	0
	Football	248	15.19	3.3	
	No exercise	248	13.43	4.07	0.001
	Badminton	248	14.84	3.94	
	No exercise	248	13.43	4.07	0.03

Compared with the students who did not participate in the badminton program, the P value ($P > 0.167$) was greater than 0.05 from the data, indicating that there was no significant difference. However, there was a significant difference in the average value obtained through statistical analysis between the two. Badminton sport averages of 15.88, 13.59, no sports between the two seemingly contradictory but again, the reason for this is no moving experience classmate little or almost no opportunity to experience the feelings and badminton project their own characteristics, such as physical, psychological, thinking, can only rely on badminton sports and other sources outside of football sports to develop their creative thinking, such as drawing, collaboration, etc. These other sources will also be shared by students involved in badminton.

3.2 Influence of Schoolyard Football on Students' Personality Development

It is pointed out that the personality psychological dimension refers to the individual psychological performance in people's treatment of objective things. Although they do not directly participate in the concrete operation of the cognition of objective things, they have the power and regulating function, and are the dynamic components of the psychological quality structure. A large number of studies have proved that sports play a positive role in the development of human personality quality. After 30 years of follow-up studies, Cooper believed that athletes have clear achievement motivation and tend to be outgoing, dominant, confident, competitive and resilient. Balog (1983) pointed out that through planned aerobic exercise, psychological characteristics such as anxiety, self-confidence and sense of self-competence can be improved. At the same time, some studies have pointed out that different sports play different roles in people's personality development. This study is to understand the influence of football on students' personality development. The personality traits component of the scale included five factors: ambition, independence, confidence, self-control and optimism. Independence means that individuals think independently in life and study. Confidence refers to the individual's confidence in his own ability. Self-control refers to the individual's supervision and regulation of his own behavior to achieve his self-goal. Optimism refers to the emotion stability and maturity of individuals, full of safe emotional experience.

Table 3 Differences of Ambition Indexes between Students Participating in Football Training, Students Participating in Badminton Training and Students Not Participating in Training

Psychological dimension	Group	Sample qty	Average	Standard deviation	P
Ambition	Football	248	16.54	3.7	
	Badminton	248	15.04	4.39	0.01
	Football	248	16.54	3.7	
	No exercise	248	14.77	4.14	0.035
	Badminton	248	15.04	4.39	
	No exercise	248	14.77	4.14	0.047

Ambition is a powerful psychological desire and spiritual force, a person's lofty ideal and ambition. Failure is not a bad thing in sports. It can promote thinking and motivation. Learning lessons can make participants become stronger. It can be seen from table 3 that the students participating in the football program have higher average "ambition" psychological latitude than those participating in the badminton program, which indicates that the students participating in the football program have better overall "ambition" psychological quality than those participating in the badminton program.

3.3 Influence of Schoolyard Football on the Adaptability Quality of Students

The dimension of adaptive factors refers to the ability of an individual to change himself or his environment in the process of socialization, so as to harmonize himself and the environment. It is a comprehensive reflection of cognitive factors and personality factors in various social environments and one of the necessary psychological qualities for individual survival and development. Professor Ratey of the United States noted that physical activity is an important means of several brain development and is the "best brain pill". Neurogranin science has also confirmed this, physical exercise will not affect learning, but will promote the development of the brain, enhance memory, and so that students are more adaptive to learning. At the same time, the PE class in school is active. Every skill needs to be imitated and practiced. The whole learning process is actually a process of interpersonal interaction, which can also be said to be a special form of social interaction. The same is true for the study of schoolyard football. Students learn not only football skills, but also the ultimate assessment goal in small games. In small games, students should learn to get along with their teammates, control their emotions and so on. The scale of psychological quality of students includes four factors: learning adaptation, interpersonal adaptation, emotional response and social adaptation. Learning adaptation means that individuals adjust their learning mode at any time

according to the content of learning environment and the teaching mode of teachers. Interpersonal adaptation refers to the individual's ability to harmonize interpersonal relations. Emotional adaptation refers to an individual's ability to adjust negative emotions. Social adaptation mainly refers to the individual's adaptability to school and class environment.

Interpersonal adaptation is a process in which an individual ADAPTS to the new social group through the positive adjustment of his/her psychological concept and behavior pattern when he/she is exposed to the new environment and forms harmonious interpersonal relations. Attends the badminton training football training students, students, not to participate in training students on optimism index through the SPSS statistical software in the system T test, P values were 0.034 ($P < 0.05$), 0.000 ($P < 0.001$), 0.001 ($P > 0.05$), shows that students take part in football training and to participate in the badminton training students interpersonal adaptability index differences but not significant, take part in football training and to participate in the badminton training students interpersonal adaptation index exists significant difference, There was no difference between the participants and the non-participants in the badminton training.

Table 4 Analysis of Interpersonal Adaptability Indexes between Students Participating in Football Training, Students Participating in Badminton Training and Students Not Participating in Training

Psychological dimension	Group	Sample qty	Average	Standard deviation	P
Adaptability	Football	248	11.25	2.81	
	Badminton	248	10.22	2.96	0.034
	Football	248	11.25	2.81	
	No exercise	248	10.19	3.11	0
	Badminton	248	10.22	2.96	
	No exercise	248	10.19	3.11	0.167

4. Conclusion

Under the background of youth schoolyard football activities, the football teaching in schools should be organized to strengthen students' physical fitness in the learning stage, master football technology and popularize football knowledge, and cultivate students' interest in football. Let the football sport become the schoolyard students study the life important constituent, let the schoolyard football activity become the comprehensive talented person's important means. Since the launch of schoolyard football activities in 2009, the specific forms of schoolyard football activities have been excessively concentrated on schoolyard football league. For carrying out football teaching in schools, increasing the proportion of football teaching in the teaching content and increasing the time for the whole school's students to take part in football activities, it is seriously neglected and fails to meet the requirements in the implementation plan. The phenomenon of "emphasizing the game and neglecting the teaching" appeared, which affected the promotion and popularization of schoolyard football activities. By analyzing the reasons of neglecting the football teaching in schoolyard football activities, it is found that schools participating in schoolyard football do not have relevant teaching materials and teaching syllabus for reference. Because of too much content of football technique and tactics, PE teachers can't choose proper content of football teaching correctly. The superior education and the sports department did not conduct the related football teaching guidance and training.

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