

Who Will Be More Active in Sports Participation?

—Analysis of College Students' Sports Participation Behavior Based on Demographic Characteristics

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Abstract

The personal basic attributes are an important factor affecting the sports participation behavior of college students. Based on a survey of 1480 questionnaires from more than a dozen colleges and universities, using T-test and ANOVA analysis, we can find that: college students with different genders and majors have significant differences in their sports participation behaviors, but there are no significant differences in their sports participation behaviors with different family backgrounds, political affiliations, and grades. The research conclusions have important theoretical significance for scientifically guiding college students to be active in sports participation.

Keywords

Personal Basic Attribute, Sports Participation, Sports Participation Behavior

1. Problem Presentation

A sampling survey by the Ministry of Education on physique and health of 1.15 million college students showed that: The overall “health unqualified rate” of students’ physique basically shows a downward trend, but the physique and health of college students are still serious. Until the 2020, for the health unqualified rate of students’ physique in the whole country, it is 6.5% for primary school students, 14.5% for junior high school students, 11.5% for high school students, and further expanded to about 30% for college students, making the decline of students’ physique have become the focus of social attention. College students are an excellent reserve force for my country’s modernization construction. While paying attention to the cultural knowledge and technical

theoretical level of college students, they should also pay attention to the changes in college students' physical quality, and guide college students to be active in sports participation.

Studying the influencing factors of college students' sports participation behavior can provide theoretical support and countermeasures for the scientific guidance of college students' sports participation in the educational circle. At present, the key topic of physical education is what the current situation of college students' sports participation is and how to guide their sports participation. Only through empirical research to understand the real thoughts of college students, can targeted strategies and suggestions be given, and the right method can be used to improve their sports participation. It can also improve the behavior of college students' sports participation, and provide theoretical support and operational strategies to improve the physical quality of college students. The sports participation behavior of college students directly affects the physical quality of college students. Through empirical research, we find the key variables that affect their participation, and guide their participation scientifically, so as to provide theoretical support and operational strategies for increasing the physical quality of college students.

2. Literature Review and Research Hypothesis

1) Literature review

There are a lot of studies on sports participation behavior in academic circles. Scholars have explained the purpose of participation and analyzed the factors that affect sports participation behavior.

From the perspective of the purpose of sports participation, [Yu Xianghai \(2013\)](#) mentioned that girls who participate in physical exercise for weight loss, fitness, leisure and entertainment account for half of the total number of survey respondents, indicating that these girls do not fully understand the importance of physical exercise to the body. Because of the limited time in school physical education, most of the female students did not fully achieve the ultimate goal of sports activities, so they failed to form a good exercise habit. [Zheng Jiakun \(2014\)](#) pointed out that adolescents are at an important stage of growth and development, and active participation in various physical exercises is helpful to the development of adolescents' physical and mental health. Due to the heavy learning tasks of adolescents, physical health is neglected. They will go to class on an empty stomach for a long time, have irregular daily routines, vigorously exercise after meals, etc. A series of wrong behaviors will affect the decline of their health and physique. Only by urging adolescent to actively participate in physical exercise, cultivating them to have a healthy, reasonable and regular life schedule and developing good habits, can they stimulate their enthusiasm for sports and enjoy the fun of sports activities. In short, the purpose of college students' physical exercise is various, but it is more to maintain a good figure and good health. Therefore, providing information and channels for college students to exercise

will help to promote college students to actively engage in physical exercise.

From the perspective of factors affecting sports participation behavior, [Hu Xiaofei, Lian Bizhen, Chen Xin \(2005\)](#) found in his research that more college students are willing to meet their sports needs by taking physical education or participating in extracurricular activities. However, due to the limited exercise time, many college students cannot exercise well. The main reason is that the class time is tight, and the majority of students cannot fully devote themselves to sports; On the other hand, the number of people attending classes is large, sports equipment is not enough, and sports field is limited are also the reason. [Zhu Tao \(2010\)](#) believes that schools should strengthen the publicity of college students' awareness of physical exercise and the formation of lifelong sports ideas, improve the cross-use of hardware facilities and multimedia in various sports venues in schools, carry out various sports activities competitions in combination with different grades, different personality characteristics, different interests and personal needs, and enhance the friendship between students on the basis of exercising the physical health of the majority of students. At the same time, cultivate the interest of college students to participate in sports activities, let them enjoy the happiness brought by sports in the process of exercise, and finally achieve the goal of national fitness, so that the majority of students can have a good physique in the era of mobile Internet. Through physical education teachers' classroom explanations, campus sports competitions, related sports knowledge competitions, debate competitions and other forms, college students can learn more about sports information, enter sports, and be familiar with sports-related knowledge and basic skills. [Liu Yi \(2014\)](#) mentioned that the limitation of school sports venues, the large number of people attending the elective courses, and the limited time for physical education are the main factors that affect college students' inability to actively participate in sports activities, resulting in a decline of college students' physique and health. In the process of implementing the national fitness plan, the country should accelerate the rapid development of school sports, provide schools with the appropriate allocation of sports venues, and open corresponding sports courses according to students' own conditions, so as to create a healthy and positive physical exercise environment for college students.

In conclusion, a comprehensive review of the existing literature found that: College students' sports participation behavior has increasingly become the focus of academic research, among which the demographic characteristics variable of college students is one of the important factors affecting their participation behavior. But at present, this research basically uses it as a control variable, lacking a research specifically on it. Therefore, a comprehensive and in-depth study on the demographic characteristics of college students is of great theoretical significance for accurately improving the level of college students' sports participation.

2) Research hypothesis

Personal basic attributes include gender, family background, political affilia-

tion, majors, and grades. A large number of literatures have shown that there are differences in the sports participation behavior of college students because of the different personal basic attribute, so the following assumptions are put forward:

H1: There are differences in the sports participation behavior of college students in terms of gender, family background, political affiliation, major and grade.

a) Gender

Wang Aimin and Zhang Liuxia (2012) proposed that the most important motivation for women to participate in sports is to get a good body shape. Zhao Daichang and Wang Biqu (2015) researched the motivation of teachers in colleges and universities to participate in leisure sports in Shandong Province. The study found that some relaxing activities such as walking and jogging are more popular, and women's motivation to participate is more to relieve stress, while men tend to be the interest. Based on the conclusions of the literature, this paper proposes the following hypotheses:

H1a: There are differences in the sports participation behavior of college students with different genders.

b) Family background

After a 12-year follow-up study, Yang et al. (1996) found that children's persistence in participating in sports was closely related to the frequency of their parents' participation in sports activities; For parents who are regularly involved in sports activities, their children are also involved in sports for a long time; Parental participation in sports activities can also be used as a predictor of sports activities in children and young people. This study provides further support for parents' influence on children's socialization of sport, and points out that young people's early experience on the socialization of sport may affect their lifelong sports participation. Based on this, the following hypotheses are proposed in this paper:

H1b: There are differences in the sports participation behavior of college students with different family backgrounds.

c) Political affiliation

Political affiliation is mainly divided into Chinese Communist Party members (including the probationary Party members), members of the Chinese Communist Youth League, democratic parties, and the masses, etc. There are differences in the enthusiasm of individuals in the sports participation with different political affiliations. Due to different political affiliations, different responsibilities and obligations, different understandings of sports participation, and different motivations for sports participation, which will affect sports participation behavior. It is hereby proposed:

H1c: There are differences in the sports participation behavior of college students with different political affiliations.

d) Major

In Zhang Guofeng's (2006) *Analysis of the Current Situation of College Students' Participation in Sports Activities and the Participation Motivation*, he

analyzed that the internal reason affecting college students' sports participation is mainly the gender difference, resulting in different needs for sports; Externally, it is mainly affected by the majors. Students of different majors have different motivations in sports participation, and the sports atmosphere created is also different. Wang Wencheng and Liu Dawei (2007) considered in the article *Research on Action Motives and Influential Factors of Physical Activity of College Students in Liaoning Province*: "The sports participation motivation of college students of different majors is mainly affected by external motivation; The quality of sports foundation plays a vital role in the formation of students' sports interest and motivation. Students of liberal arts and sciences show great differences, science students are mainly affected by objective factors, and liberal arts students are mainly affected by subjective factors". It is hereby proposed:

H1d: There are differences in the sports participation behavior of college students with different majors.

e) Grade

Zhou Hui & Hu Hao (2015) found that different grades of medical college students have different characteristics in the external adjustment motivation of sports. There is a significant difference between freshman students and senior students in terms of deepening understanding and communication of sports, and there are differences between juniors and sophomores and freshmen in terms of the importance of sports to lifestyle, but the difference is not significant. It can be seen that the senior students pay more attention to their feelings in sports, and the external motivation of the senior students to participate in sports activities is obviously stronger than that of the freshman students. Based on the conclusions of the literature, this paper proposes the following hypotheses:

H1e: There are differences in the sports participation behavior of college students with different grades.

According to the above research hypothesis and literature review, the relationship model between personal basic attributes and college students' sports participation behavior is given, as shown in **Figure 1**.

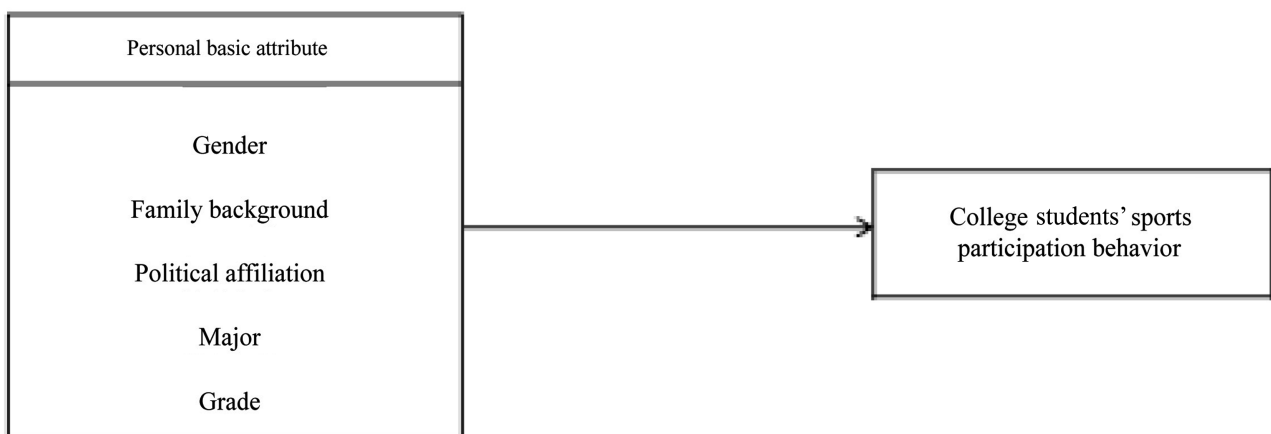


Figure 1. The relationship model between personal basic attributes and college students' sports participation behavior.

3. Research Method

This research uses the method of questionnaire survey. All items in the questionnaire are based on the actual characteristics of college sports participation behavior, combined with the results of previous empirical research and the classic theoretical literature in the academic circle. All the questionnaires were measured using the Likert seven-scale scale.

1) Pre-test

The pre-test adopts the method of purposive sampling. The author conducted a survey in Chengdu in July 2021, and used the test-retest reliability to test the reliability of the questionnaire. In the first test, a total of 101 questionnaires were distributed, 85 were returned, and 71 were valid. Questionnaires were distributed on site, collected on site, and then all questionnaires were numbered. In this study, test-retest reliability and Cronbach's alpha reliability were used to test the pre-test reliability, and content validity test and construct validity test were used to test the validity. The items that did not meet the standard were eliminated, and then the expression of the items and their arrangement order were adjusted, and finally a formal questionnaire was formed.

2) Formal test

The formal survey was launched from September 2021 to December 2021 for a period of 4 months. In order to ensure the scientificity and generalizability of the research results, the distribution of the samples is to select universities in different regions of China as much as possible to reflect the national situation as much as possible. Therefore, we conducted a sampling survey on universities in Sichuan, Shanxi and other places. The sampling of the questionnaires was based on purposive sampling (judgment sampling). The personal basic attributes of the samples, such as male-female ratio, age ratio and grade ratio, were all as the same as those of the mother. A stratified sampling was made on the active, moderate and inactive sports participation, which reached the maximum possible coverage and was representative. A total of 1763 questionnaires were distributed and returned. After excluding invalid questionnaires, 1480 valid questionnaires were finally obtained, with an effective rate of 84%. The Cronbach's alpha value of the formal questionnaire is greater than 0.9, which indicates that the formal questionnaire has a very good reliability. At the same time, we have conducted content validity and construct validity tests to ensure the scientificity of the formal questionnaire.

4. Research Analysis and Research Findings

1) The relationship between gender and college students' sports participation behavior

First of all, verify H1a: There are significant differences in sports participation behavior of college students with different genders. The verification is carried out by the method of T-test, and the verification results are shown in **Table 1**.

Table 1. T-test of gender on college students' sports participation behavior.

	T value	F	<i>p</i> value
Sports participation behavior	-2.376	23.839	0.000

* $p < 0.05$; ** $p < 0.01$.

It can be seen from **Table 1** that the observed value of the F statistic of this test is 23.839, the observed value of the T statistic is -2.376, and the corresponding probability p value is 0.000, so we believe that there is a significant difference in sports participation behavior of male and female students. Thus, the hypothesis of H1a that there are differences in the sports participation behavior of college students with different genders is established.

2) The relationship between family background and college students' sports participation behavior

This study uses ANOVA analysis to verify the hypothesis H1b: There are significant differences in sports participation behavior of college students with different family backgrounds. The test results are shown in **Table 2**.

It can be seen from **Table 2** that there is no significant difference in the sports participation behavior of college students with different family backgrounds ($p = 0.108 > 0.05$). And through the scores of each factor of sports participation behavior, it can be seen that there is no significant difference in each factor of college students' sports participation behavior with different family backgrounds. Thus, the hypothesis of H1b that there are differences in the sports participation behavior of college students with family backgrounds is established.

3) The relationship between political affiliation and college students' sports participation behavior

This study uses ANOVA analysis to verify the hypothesis H1c: There are significant differences in sports participation behavior of college students with different political affiliations. The test results are shown in **Table 3**.

It can be seen from **Table 3** that there is no significant difference in the sports participation behavior of college students with different political affiliations ($p = 0.086 > 0.05$). And through the scores of each factor of sports participation behavior, it can be seen that there is no significant difference in each factor of college students' sports participation behavior with different political affiliations. Thus, the hypothesis of H1c that there are differences in the sports participation behavior of college students with different political affiliations is established.

4) The relationship between major and college students' sports participation behavior

This study uses ANOVA analysis to verify the hypothesis H1d: There are significant differences in sports participation behavior of college students with different majors. The test results are shown in **Table 4**.

It can be seen from **Table 4** that there are significant differences in the sports participation behavior of college students with different majors ($p = 0 < 0.05$). From the data scores of several factors, it can be seen that there are significant

differences in the sports participation behavior of college students with different majors. But in general, there are significant differences in the sports participation behavior of college students with different majors. Thus, the hypothesis of H1d that there are differences in the sports participation behavior of college students with different majors is established.

5) The relationship between grade and college students' sports participation behavior

This study uses ANOVA analysis to verify the hypothesis H1e: There are significant differences in sports participation behavior of college students with different grades. The test results are shown in **Table 5**.

Table 2. ANOVA test of family background on college students' sports participation behavior.

Scale name	Sources of variation	Sum of squares of deviation from mean (SS)	Degree of freedom (DF)	Mean square (MS)	F value	<i>p</i> value
Sports participation behavior	Between-group	2.281	2	1.141	2.229	0.108
	Intra-group	755.987	1477	0.512		
	All	758.268	1479			
Classroom sports participation behavior	Between-group	15.261	2	7.630	4.214	0.15
	Intra-group	2674.382	1477	1.811		
	All	2689.643	1479			
Extracurricular sports participation behavior	Between-group	6.954	2	3.477	2.030	0.132
	Intra-group	2530.449	1477	1.713		
	All	2537.403	1479			

Table 3. ANOVA test of political affiliation on college students' sports participation behavior.

Scale name	Sources of variation	Sum of squares of deviation from mean (SS)	Degree of freedom (DF)	Mean square (MS)	F value	<i>p</i> value
Sports participation behavior	Between-group	4.174	4	1.043	2.041	0.086
	Intra-group	754.094	1475	0.511		
	All	758.268	1479			
Classroom sports participation behavior	Between-group	15.884	4	3.971	2.191	0.068
	Intra-group	2673.759	1475	1.813		
	All	2689.643	1479			
Extracurricular sports participation behavior	Between-group	15.317	4	3.829	2.239	0.063
	Intra-group	2522.086	1475	1.710		
	All	2537.403	1479			

Table 4. ANOVA test of major on college students' sports participation behavior.

Scale name	Sources of variation	Sum of squares of deviation from mean (SS)	Degree of freedom (DF)	Mean square (MS)	F value	<i>p</i> value
Sports participation behavior	Between-group	13.741	3	4.580	9.080	0.000
	Intra-group	744.527	1476	0.504		
	All	758.268	1479			
Classroom sports participation behavior	Between-group	37.650	3	12.550	7.872	0.000
	Intra-group	2353.082	1476	1.594		
	All	2390.732	1479			
Extracurricular sports participation behavior	Between-group	27.699	3	9.233	6.209	0.000
	Intra-group	2194.798	1476	1.487		
	All	2222.497	1479			

Table 5. ANOVA test of grade on college students' sports participation behavior.

Scale name	Sources of variation	Sum of squares of deviation from mean (SS)	Degree of freedom (DF)	Mean square (MS)	F value	<i>p</i> value
Sports participation behavior	Between-group	0.329	4	0.082	0.160	0.958
	Intra-group	757.939	1475	0.514		
	All	758.268	1479			
Classroom sports participation behavior	Between-group	1.541	4	0.385	0.226	0.924
	Intra-group	2515.389	1475	1.705		
	All	2516.930	1479			
Extracurricular sports participation behavior	Between-group	2.416	4	0.604	0.392	0.815
	Intra-group	2274.676	1475	1.542		
	All	2277.092	1479			

It can be seen from **Table 5** that there is no significant difference in the sports participation behavior of college students with different grades ($p = 0.958 > 0.05$). And through the scores of each factor of sports participation behavior, it can be seen that there is no significant difference in each factor of college students' sports participation behavior with different grades. Thus, the hypothesis of H1e that there are differences in the sports participation behavior of college students with different grades is established.

5. Conclusions and Recommendations

1) There is no significant difference in the sports participation behavior of college students with different family backgrounds, political affiliations, and grades.

However, there are significant differences in the sports participation behavior of college students with different genders and majors. Therefore, colleges and universities should pay attention to these influential variables when guiding college students to actively participate in sports activities, rather than paying attention to variables that have no influence.

2) Gender has a significant impact on college students' sports participation behavior, so different sports participation guidance strategies should be adopted for different genders. First of all, teachers should adopt differentiated teaching methods and standards in the teaching process, adopt different teaching methods for students of different genders, and guide college students to be active in sports participation. The sports participation motivation of college students should be cultivated according to the differences between male and female students' preference for activities. Activities of interest to students should be opened to increase students' interest in sports participation. Secondly, schools should develop the sports clubs to enhance college students' sense of belonging and improve their autonomous needs motivation of the sports participation, so as to improve the level of college students' sports participation; carry out cooperative projects to make up for the differences between male and female students in physical quality, sports tendency, personality, sports interest, etc., encourage college students to experience the charm of sports activities of different natures through cooperation, and guide college students to participate in sports activities in a cooperative way.

3) Major has a significant effect on college students' sports participation behavior, so different sports participation guidance strategies should be adopted for different majors. Firstly, the strength of the school should be given full play to improve the level of college students' sports participation. We should actively urge college students of all majors to carry out physical exercise, and especially encourage college students who are not majoring in sports to actively participate in sports activities. We should increase publicity efforts of the physical exercise, increase incentives, implement both spiritual and material incentives, and ideologically stimulate students' interest in physical exercise. Schools should also build high-quality sport fields, equip standard physical exercise equipment and maintain regularly to satisfy the field needs of student sports. Secondly, schools can also cooperate with the student clubs to provide certain support in terms of funds and equipment, and hold more interesting sports activities for college students who are not majoring in sports to improve the participation of the students. Finally, the school should give full play to its supervisory role and urge students to actively participate in physical exercise. It can set up the way of punching into the playground or sports hall, keep a record of each student's exercise, and conduct an overall evaluation at the end of the semester. The school can set different evaluation standards based on the different foundations of students to form a developmental evaluation model. In short, schools should actively urge college students to do physical exercise to enhance their physique.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Hu, X. F., Lian, B. Z., & Chen, X. (2005). Investigation, Analysis and Countermeasures of College Students' Sports Behavior in Five Colleges and Universities in Beijing. *Journal of Beijing Sport University, No. 5*, 657-660.
- Liu, Y. (2014). The Impact of College Students' Sports Behavior Habits on Physique Health. *Contemporary Sports Technology, 4*, 197-198.
- Wang, A. M., & Zhang, L. X. (2012). Female Body Aesthetics and Fitness Participation Motivation from the Perspective of Social Gender. *Physical Education and Science, 33*, 63-66.
- Wang, W., & Liu, D. (2007). Research on Action Motives and Influential Factors of Physical Activity of College Students in Liaoning Province. *Journal of Shenyang Sport University, 26*, 50-53.
- Yang, X., Telama, R., & Laakso, L. (1996). Parents, Physical Activity, Socioeconomic Status and Education as Predictors of Physical Activity and Sport among Children and Youths: A 12 Year Follow up Study. *International Review for the Sociology of Sport, 31*, 273-189. <https://doi.org/10.1177/101269029603100304>
- Yu, X. (2013). Investigation and Analysis on Physical Behavior of Female College Students and Sports Values in Vocational Colleges. *Journal of Chifeng University (Natural Science Edition), 29*, 129-130.
- Zhang, G. (2006). Analysis on the Current Situation and Motivation of College Students' Participation in Sports Activities. *Science and Education Collection, No. 7*, 39-40.
- Zhao, D., & Wang, B. (2015). Research on the Motivation Characteristics of College Teachers' Participation in Leisure Sports in Shandong Province. *Shandong Sports Science and Technology, No. 4*, 88-91.
- Zheng, J. (2014). Objectives and Strategies for Cultivating Adolescent's Healthy Sports Behavior. *Journal of Wuhan Institute of Physical Education, 48*, 65-71.
- Zhou, H., & Hu, H. (2015). Research on the Motivation Characteristics of Sports Lifestyle Participation of Medical College Students. *China Higher Medical Education, No. 4*, 29-30.
- Zhu, T. (2010). Research on the Influencing Factors of College Students' Sports Behavior. *Education and Vocation, No. 5*, 189-190.