

# Comparative Analysis on Physical and Mental Health of Minority Students and Han Students in China's Common Colleges

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**Keywords:** Common colleges, Minority students, Han students, Physical and mental health

**Abstract.** In order to understand the characteristics of physical and mental health of minority students and Han students in China's common colleges, and provide scientific evidence for improving physical and mental health of college students, this paper applies test, questionnaire, mathematical statistics and other research methods, taking college students in Shaanxi Province as the study case, mental health of minority students and Han students in colleges and universities were compared and analyzed. The results showed: minority students in body shape, body function, movement quality and psychological conditions and other aspects there are some differences with the Han Students.

## Introduction

Physique is the material basis of human life activities and labor capacity to work, the body in shape, physiological, biochemical and behavioral characteristics relatively stable, which reflects the level of human life activities and athletic ability. <sup>[1]</sup> Mental health refers to all aspects of mental and events in a good or normal state. <sup>[2]</sup> As China's economic development, physical and mental health has been growing attention. Minority is an important part of the Chinese nation, people of all nationalities together to create a Chinese long history and splendid culture. <sup>[3]</sup> The general health of college students is an important part of national health; it determines the country's power production potential, minority students' physical and mental health of adolescent physical relationship to improve the overall level and the overall quality of the people. <sup>[4]</sup> This paper comparative analysis of minority students in Shaanxi Province and Han students of physical and mental health status, understand the similarities and differences between minority students and Han students' physical and mental health status, minority students and Han students explore physical development characteristics and rules, in order to improve physical and mental health of college students to provide a theoretical reference, providing physical and mental health personnel for the sustainable development of minority areas of social, economic, education and other social programs.

## Objective and method of study

### Study objective

In order to ensure the comprehensiveness of the obtained data, the accuracy, the author uses stratified sampling method to extract Xi'an Jiaotong University, Northwestern Polytechnical University, Northwest Agriculture and Forestry University, Xi'an University of Electronic Science and Technology, Baoji Arts and Sciences, Yan'an and Yulin University School of seven Universities 838 college students as subjects, including minority students 423, mean age; 533 Han students, the average age years. Minority students constitute specific case: 151 Muslim students, 79 students Manchu, Mongolian Students 57, 136 Hmong students.

### Study method

1). Test Method: in strict accordance with the 2005 "National Student Physical Health Standard" standards and rules were measured, using a computer to test statistics and data processing. Test time: in May 2012.

Test indicators include: height, weight, bust, vital capacity, standing long jump, 100m (M), pull-up (male), 1000m (M), 50m (female), one minute of sit-ups, 800m (female), grip strength, Sit and Reach.<sup>[5]</sup>

2). Questionnaire: On the basis of information on relevant literature survey and approved the use of the current domestic and foreign common mental disorders and mental illness symptoms checklist (SCL-90), the self-rating scale of 10 factors were psychological symptoms reflect aspects of the case 10, to ensure scientific and accurate understanding and knowledge of the students involved in the evaluation of mental health The survey total of 526 questionnaires were returned 508 valid questionnaires, the efficiency was 96.6%.

3). Mathematical statistics: the measurement, surveys the raw data, using SPSS13.0 software for statistical processing.

4). Comparative analysis: minority students and Han students body shape, body function data, movement quality, psychological status of comparative analysis, obtained their physical and mental health characteristics.

5). Logical analysis: The logical analysis of test data, draw appropriate conclusions.

## Study results and analysis

### The test results of physical and mental health of minority college students and Han students

#### *Body shape features of minority college students and Han students*

Graduates at the University and Han minority students do not have significant differences in terms of average height, height is the reaction skeletal development and an important indicator of the status of human development level longitudinal, which can be drawn from skeletal development in ethnic minority college students are basically the same with their peers. Statistics on average weight and average bust of minority college students is significantly lower than the Han college students, the difference was significant ( $P < 0.01$ ), explained Hans-average university student body full extent of the lateral development of the body was significantly higher than minority students.

#### *Somatic function features of minority college students and Han students*

The size of the lung capacity can effectively reflect the body's respiratory function, which is closely related to height, weight, chest and other body shape index; vital capacity BMI is the ratio of the body's own vital capacity and weight, to reflect the degree of correlation vital capacity and weight, is important human respiratory function index; survey: minority men, the average lung capacity of female students is lower than Han students, was a significant difference ( $P < 0.05$ ). The average height of minority male students vital capacity index higher than the Han male college students and showed significant differences ( $P < 0.05$ ), while the average female college students of minority vital capacity, body mass index lower than Han female students and there was a significant difference ( $P < 0.05$ ).

#### *Athletic constitution features of minority college students and Han students*

Speed quality (50m, 100m), the average level is lower than the Han minority male students male students, and there was a significant difference ( $P < 0.05$ ), whereas no significant difference ( $P$  average between girls  $> 0.05$ ); upper limbs power quality (chin-up, grip strength), the average level of minority male students was significantly higher than the Han male students, there was a significant difference ( $P < 0.01$ ); flexibility quality (Sit and Reach) aspect, the Han Students and the average level of minority college students no significant difference ( $P > 0.05$ ); explosive quality (standing long jump), the average level of minority male students is lower than Han male student, was a significant difference ( $P < 0.05$ ), between girls no significant difference in the average level ( $P > 0.05$ ); endurance qualities (800m, 1000 m) terms, minority students average higher than the Han college students, was a significant difference ( $P < 0.05$ ).

#### *Mental health characteristics of minority college students and Han students*

Two elements of human health including physical health and mental health, psychological imbalance or unstable state will directly lead to a decline to human health, this study abroad common mental disorders and mental illness symptoms checklist (SCL-90), the self-rating scale of 10 factors

were psychological symptoms reflect aspects of the case 10, through 10 indicators of psychological factors Minority College Students and Han college students test results are shown below (Table 1):

Table 1. SCL-90 comparison between minority college students and Han students

	Minority students		HAN STUDENTS		P
	X	SD	X	SD	
Somatization	6.54	0.73	6.41	0.68	>0.05
Obsessive-compulsive symptom	4.89	0.68	3.79	0.78	<0.05
Sensitive of interpersonal relationship	7.26	0.63	4.21	0.69	<0.05
Depression	9.88	0.47	7.89	0.51	<0.05
Anxiety	7.01	0.42	6.21	0.46	<0.05
Hostility	4.81	0.51	4.57	0.49	>0.05
Terror	4.47	0.46	3.81	0.39	<0.05
Stubborn	3.84	0.62	3.71	0.58	>0.05
Insanity	4.73	0.52	4.15	0.42	<0.05

Minority and Han Students of Mental Health Symptom Rating Scale final measurement results of view, is the per capita assessment showed no obvious adverse psychological symptoms, but both compared to minority students in the terror, obsessive-compulsive symptoms, psychosis sexual, interpersonal sensitivity factor of five worse than the Han college students and there is a significant difference ( $P < 0.01$ ).

### The test results analysis of the physical and mental health of minority college students and Han college students

#### 1). Analysis of the difference between minority students and Han students in body shape features

Tests found that different ethnic students have a relatively significant national differences in body morphology aspect, for example, Muslim students, Mongolian student tall, strong body; Miao students that shorter, medium body; Manchu minority student body Ethnic Students in the highest, slender body. Thus, congenital genetic factors have a direct impact on the body shape. In addition, the minority and the Han Nationality Undergraduate Students difference in body shape is closely related to congenital genetic factors and diet.

#### 2). Analysis of the difference between minority students and Han students in body function features

Ethnic minorities in China was a large distribution, small centralized state, covering vast territory, according to the survey, 84.3 percent of students from ethnic minorities in remote mountainous areas, plateau or pastoral, atmospheric pressure and oxygen content in these areas are low relative to the plains they long to live in such a low pressure, low oxygen natural environment, so vital capacity and pulmonary ventilation increase correspondingly; secondly, rail and vehicle traffic in these areas is relatively backward, people travel mostly on foot or by bike, it also promotes the development of their leg muscles endurance. Compared with this, the Han students come from the economically more developed plains, more favorable living environment, participation in sports subjective consciousness and objective conditions better, therefore, differences between the Han undergraduate students minority bodily functions and their characteristics living environment are closely related.

#### 3). Analysis of the difference between minority students and Han students in physical condition features

Physical characteristics of minority college students and Han college students showed a major difference in four areas of upper body strength, endurance quality, speed, quality and power. The

reason, religious and cultural minorities, ethnic customs and regional ideological constraints and affects the minority college students to participate in physical exercise approach.

#### 4). *Analysis of the difference between minority students and Han students in mental features*

Most minority college students live in the economy is relatively backward, relatively weak level of education in remote areas, where incomes and living standards generally low, which to some extent affected their food, clothing, housing, transportation, living conditions difficult and learn the basics of a weak minority more heavy pressure on our students. In addition, due to the long life there is a big difference in a relatively remote farming, pastoral life, language, culture, religion and mainland students, in the short term is relatively difficult to make a change this difference is likely to cause the Minority College Students' self-esteem, self-closing mentality, resulting in a narrow range of communication, lack of enthusiasm for life and other adverse consequences, causing mental disorder.

### **Conclusion and Suggestion**

#### **Conclusion**

1). Minority college students and Han students no significant differences in height indicators, but due to differences in congenital genetic factors and diet leads and Han Students in weight, bust the gap significantly, the girls more significant differences; due to different living environment, Minority boys on spirometer height index higher than the Han boys and there is a significant difference between minority girls on vital capacity lower than the Han girls BMI and there are significant differences.

2). Minority college students physical exercise and constraints due to the impact of religious culture, national customs and regional thought, no significant difference in the quality of its flexibility and Han students in the speed quality, power quality, minority boys and boys below the Han presence significant differences; in the upper body strength and quality, endurance qualities, minority male and female students were higher than Han students and there is a significant difference.

3). Minority college students and Han Students from mental health symptoms ultimate measure of self-assessment analysis did not show obvious adverse psychological symptoms, but because of differences in economic conditions and religious culture, in obsessive-compulsive symptoms, interpersonal sensitivity, terror, psychotic Han students on factors other items were better than minority students and there are significant differences.

#### **Suggestion**

1). Government and universities to students physique health to develop specific plans for the enhancement and the introduction of relevant policies and traditional minority national sports in colleges and universities, will have ethnic characteristics of traditional sports and reasonable transformation, processing and refining, prompting more practical and viable minority Sports entering university campus, ensuring physical exercise minority college students; at the same time, for the minority students generally have stylistic characteristics of expertise, to encourage minority students to actively participate in social practice, commitment to social obligations, give full play to its cultural activities on campus role in helping them cope with difficulties right, digging their own advantages, cooperation and establish the confidence to participate in the competition.

2). Strengthen publicity and education on universities nutrition and health aspects of college students to establish the correct concept of health, increasing nutritional knowledge of university students, to enhance self-care awareness, ensure the scientific students' eating habits and diet, rationalization; colleges and universities to ensure that minority Ethnic Students catering quality schools for minority students specialized restaurant offers halal food to meet the dietary requirements of minority students, with full respect for their eating habits.

3). Government policies and regulations to strengthen the sport in the minority areas, to ensure sustained development of minority sports; sports minority areas to increase capital investment, to resolve their stadium dilapidated equipment and poor facilities and lack of physical activity and funds

question; accelerate the economic development in minority areas and improve income and living standards of the people.

### **Acknowledgments**

This paper is a scientific planning project of Shanxi Science and Technology Agency, the project number: 2012KRM63.

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