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Analysis and Study of College Students' Physical Health State in Southwest China

-- A Case Study of Southwest Petroleum University (Nanchong Campus)

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Abstract

In 2019, The General Office of the State Council issued the "Outline for Building a Leading Sports Nation", it pointed out that the promotion of young people's physical fitness and the development of healthy lifestyle are the important contents of school physical education, and the physical health level of students is included in the government, education administrative departments, and school's assessment system, and fully implement the promotion plan of teenager physical activity. This paper takes the physical health test data of students in Southwest Petroleum University (Nanchong campus) as the research objects, compares and analyzes the physical state of students in Southwest China from multiple angles, finds out existing problems, and proposes strategies to improve the physical health state of students.

Keywords

Young People's Physical Fitness; Healthy Lifestyle; Strategies.

1. Research Objects

This paper takes the physical health test data of students in Southwest Petroleum University (Nanchong campus) as the research objects, the test data comes from the "physical health test intelligent system".

2. Research Methods

2.1. Data Statistics Method

The physical health test data of freshmen, sophomores and juniors in school were counted, processed and analyzed through EXCLE table.

2.2. Comparative Analysis Method

The comparative analysis method was used to conduct the comparative analysis from the excellent rate, good rate, and pass rate (including pass, good, and excellent) of the student's physical health test, and find out the problems of the student's physical health.

3. Results and Analysis

3.1. Standing Long Jump

It can be found from Table.1 that from freshman to junior year, the passing rate of the sophomore year is higher than that of the freshman year, and the passing rate of the junior year is significantly lower than that of the freshman and sophomore years; the excellent rate of female students in test can reach 12.07% in the freshman year, and it shows a downward trend

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as the school year increases; the excellent rate of male students is significantly lower than that of female students. The good rate of female students in test remained stable with the increase of the school year; the good rate of male students in test showed a downward trend.

Table 1. Test results of standing long jump

	academic year	pass rate	excellent rate	good rate
female	freshman year	90.17%	12.07%	14.66%
	sophomore year	92.91%	8.45%	15.37%
	junior year	86.62%	5.32%	14.24%
male	freshman year	80.20%	5.09%	10.92%
	sophomore year	82.87%	2.36%	8.21%
	junior year	68.54%	1.50%	5.15%

Standing long jump mainly tests the explosive power of the lower limbs of students, according to the data in Table 1, it can be found that the explosive power of most college students' lower limb only reaches the passing level, as the school year increases, and it is on the decline.

3.2. Sit and Reach

Table 2. Test results of sit and reach

	academic year	pass rate	excellent rate	good rate
female	freshman year	97.06%	18.31%	17.10%
	sophomore year	99.66%	26.77%	24.41%
	junior year	99.14%	18.70%	20.58%
male	freshman year	94.26%	21.46%	12.49%
	sophomore year	82.87%	2.36%	8.21%
	junior year	94.64%	9.12%	13.16%

It can be found from Table 2 that from the freshman year to the junior year, 90% of the female students in the sit and reach test can maintain above the pass, 35% of the female students can maintain the test results above the good; more than 90% of male students can reach the pass level in the freshman and junior year, and more than 20% of male students can reach the excellent level in the freshman and junior year. The pass rate and excellent rate of male students in the sophomore year are obviously better than the freshman and junior year.

Sit and reach mainly tests the flexibility of students, according to the data in Table 2, it can be found that the flexibility of current college students can almost reach several levels, and a small number of students can reach an excellent level.

3.3. Height and Weight

Table 3. BMI test results

	academic year	normal ratio	obesity ratio	underweight ratio	overweight ratio
female	freshman year	88.62%	0.86%	4.31%	6.21%
	sophomore year	90.76%	0.67%	3.19%	5.38%
	junior year	90.12%	1.19%	3.58%	5.11%
male	freshman year	71.05%	6.20%	10.64%	12.12%
	sophomore year	72.82%	5.95%	9.33%	11.90%
	junior year	65.10%	7.73%	6.72%	18.78%

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According to the data in Table.3, it can be found that from the freshman year to the junior year, about 90% of female students' height and weight are normal, and the obesity ratio is low, about 5% of female students have reached the overweight standard, and about 3% of female students have reached the underweight standard; about 70% of the male students' height and weight are normal in the freshman and sophomore years, and only 65.10% are the normal standard in the junior year, more than 15% of the male students are obese or overweight, as the school year increases, the number of people who are underweight is on the decline.

3.4. Vital Capacity

Table 4. Test results of vital capacity

	academic year	pass rate	excellent rate	good rate
female	freshman year	86.72%	2.07%	4.83%
	sophomore year	95.80%	3.19%	4.54%
	junior year	93.26%	2.59%	4.84%
male	freshman year	65.40%	1.76%	6.11%
	sophomore year	77.99%	2.56%	5.73%
	junior year	82.21%	3.04%	9.23%

According to the data in Table.4, it can be found that the total pass rate of female classmates in the vital capacity test in the junior and sophomore years is significantly better than that in the freshman year, and the excellent rate and good rate remain stable; from the freshman year to the junior year, the overall pass rate of male students in vital capacity test has been increasing year by year, the excellent rate and good rate are slowly increasing; the passing rate of male students in vital capacity test is significantly lower than that of female students.

3.5. 50 Meters Dash

Table 5. Test results of 50 meters dash

	academic year	pass rate	excellent rate	good rate
female	freshman year	95.86%	1.90%	5.34%
	sophomore year	98.30%	2.55%	9.18%
	junior year	93.60%	0.84%	3.03%
male	freshman year	98.98%	8.70%	7.96%
	sophomore year	99.39%	19.45%	13.10%
	junior year	98.57%	5.81%	5.72%

According to the data in Table.5, it can be found that from the freshman year to the junior year, the total pass rate of male and female students in the 50 meters dash test is over 93%; the excellent and good rate of male students in the 50 meters dash test in the sophomore year is significantly higher than that of the freshman year and junior year, the excellent and good rate of male students in the 50 meters dash test is significantly higher than that of female students.

3.6. Long-distance Running

Table 6. Test results of Long-distance running

	academic year	pass rate	excellent rate	good rate
female	freshman year	97.24%	2.93%	17.07%
	sophomore year	95.03%	2.40%	13.72%
	junior year	90.93%	1.60%	10.50%
male	freshman year	83.63%	1.20%	6.66%
	sophomore year	76.15%	0.72%	6.96%
	junior year	64.43%	0.31%	3.46%

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According to the data in Table 6: from the overall results, the total pass rate of female students in the Long-distance running test remained above 90%, and the good rate remained above 10%; the total pass rate and the excellent rate of male students in the Long-distance running test are lower than those of female students. The excellent and good rate is not more than 10%, the total pass rate in the junior year is only 64.43%, and the excellent rate in the sophomore and junior years is less than 1%.

The Long-distance running project test are mainly fed back to the students' aerobic endurance ability, according to the data in Table 6, it can be found that as the school year increases, the students' aerobic endurance is obviously on the decline.

3.7. Sit-up

Table 7. Test results of Sit-up

	academic year	pass rate	excellent rate	good rate
female	freshman year	97.93%	0.00%	0.86%
	sophomore year	97.97%	0.17%	1.02%
	junior year	94.26%	0.00%	1.25%

According to the data in Table.7, it can be found that during the freshman to junior year, female students' excellent and good rate in Sit-up test is low, the excellent rate is no more than 1%, the good rate is about 1%, and the pass rate is more than 94%. It shows that the waist and abdomen strength of female students can reach the pass level, but it needs to be further strengthened and improved.

3.8. Pull-up

Table 8. Pull-up test results

	academic year	pass rate	excellent rate	good rate
male	freshman year	33.11%	3.10%	3.48%
	sophomore year	35.71%	6.09%	3.20%
	junior year	33.24%	5.64%	23.97%

According to the data in Table.8, it can be found that the Pull-up test results reflect male students' upper limb strength, waist and abdomen strength need to be strengthened. During the freshman to junior year, the total pass rate of the test is only about 35%, and the excellent and good rate is low. By looking at the specific test data of the students, it can be found that most students' Pull-up test score is 0.

4. Conclusion and Suggestion

4.1. Conclusion

The national college students' physical health test includes height and weight, standing long jump, vital capacity, sit and reach, 50 meters dash, middle and long distance running, Pull-up (male) and Sit-up (female), there are 7 projects in total, and it mainly evaluates the physical health of students from the body shape, explosive power of upper and lower limbs, core strength, flexibility, aerobic endurance and so on.

The physical health state of female students: more than 90% of female students can meet the pass standards in all test indexes, the excellent and good rate of test results of vital capacity, Sit-up and 50 meters dash are relatively low, physical qualities such as waist and abdomen strength and lower limb explosive force need to be further improved.

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The physical health state of male students: upper limb strength and waist and abdomen strength are urgently need to be strengthened; fewer students can reach excellent levels of aerobic endurance, and the overall pass rate is low, as the grade increases, there is a clear downward trend; the number of obese and overweight students is on the increase with the rise in the grade, the number of students whose BMI index reaches the standard is decreasing year by year; the aerobic endurance quality needs to be strengthened urgently, the number of people who meet the pass standard is low, and the number of people who meet the good standard does not exceed 10%.

4.2. Suggestions

The research on the teaching reform of college physical education courses is strengthened, the curriculum construction is optimized, the reasonable and effective physical exercise programs of college students are designed for the junior and senior years, starting from ideology, guide students to persist in scientific exercise under the conditions of limited time and space, and develop good habits of lifelong sports.

The research on the construction of intelligent management platform of college physical education teaching information is actively carried out under the perspective of sports power, the intelligent management platform of students' physical health is built, and real-time online monitoring of students' physical health is realized.

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References

[1] The General Office of the State Council issued the "Outline for Building a Leading Sports Nation"[J]. China's Ethnic Groups, 2019, (09): 29.

[2] Xuan Jitao. Analysis of the Informatization Construction of College Smart Campus under the Background of Big Data[J]. China Management Informationization, 2019, 22(12): 145-146.

[3] Zhao Yin. Analysis of the Outward-Bound Project to Promote the Improvement of Students' Physical Health Test Standards[J]. Science & Technology of Stationery & Sporting Goods, 2021(19): 91-92.

[4] Cao Haixin. Test Result Analysis and Countermeasure Research Physical Health Test of Students in Xi'an Shiyou University in the 2020-2021 Academic Year[J]. Science & Technology of Stationery & Sporting Goods, 2021(19): 116-118+124.

[5] Hu Yueying, Zong Bobo, Hou Zhitao, Luan Lixia. From Result Generation to Research and Judgment Intervention: Path Conversion of Data Application for National Students' Physical Fitness Test [J]. Journal of Physical Education, 2021, 28(05): 114-119.

[6] Teng Longxue, Teng Zihuan, Yan Su. Analysis of the Physical Health State of Boy and Girl Students-Taking North China Electric Power University as an Example[J]. Science & Technology of Stationery & Sporting Goods, 2021(17): 196-198.

[7] Wang Jing, Zhang Xu. Tracking and Evaluation of Dynamic Changes of College Students' Physical Health--Taking China University of Petroleum (Beijing) as an Example[J]. Contemporary Sports Technology, 2021, 11(23): 112-114.

[8] Liu Yue, Li Dongmei. Research on the Dilemma of College Students' Physical Health Crisis and Relief Strategies--The Reflection Based on Public Physical Education Teaching in Higher Vocational Colleges [J]. Sport & Style, 2021(05): 173-175.

[9] Hua Jianjun. Research on the Correlation between College Students' Sports Attitude and Physical Health [J]. Bulletin of Sport Science & Technology, 2021, 29(04): 22-23+100.

ISSN: 2688-8653

[10] Kou Shiyin, Liu Guanghui, Wang Kuan. Analysis and Research on the Physical Health Data of Shandong Vocational College Students[J]. Scientific & Technical Information of Gansu, 2021, 50 (03): 67-71.