Dynamic Analysis of Physical Quality Index and Total Score in Chinese Medicine College Students from 2016---2019

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Abstract: Through the literature material, physical measurements and methods of mathematical statistics, from 2016 to 2019 colleges and universities of Chinese medicine physical quality of college students involved in the first and the second index and the overall constitution monitoring dynamic analysis, aims to understand the colleges and universities of Chinese medicine college students' physical quality and the overall trend of constitution, provide the basis for promote the development of their physical health. The results show that the overall situation of college students' physical quality is relatively good, but the failure rate accounts for a certain proportion. However, from the analysis of the total score and the mean score, it can be seen that the overall constitution is still unstable and declining.

1. Introduction

This paper collects, collates and analyzes the data of the physical quality index obtained from the tests of the undergraduates of traditional Chinese medicine colleges in recent years.A comprehensive grasp of traditional Chinese medicine colleges and universities of ordinarycollege students' physical quality, promote the overall development, all-round reset medical colleges and universities sports teaching goal, content, method, and further reasonable scientifically build colleges and universities of Chinese medicine foundation of public physical education curriculum, and for the school physical education teaching and the extracurricular exercise macro decision-making to provide the reference.

2. Subjects

Randomized stratified cluster sampling of 6374 Chinese medicine colleges (2131 for boysand 4243 for girls) were in school; the test collected data on their physical fitness and total scores for the four years from 2016 to 2019, and conducted analysis and discussion.

3. Research Methods

3.1 Literately materials

Through CNKI and the National Student Physical Health Standards Data Management Center, a large number of related literature and books are reviewed and organized. According to needs, a great deal of information on physical health, physical education, and school sports are collected. Provide scientific theoretical basis and basis for research.

3.2 Fitness Measurement

According to the requirements of the “Standard”, data collected from several indicators related to

physical fitness are mainly collated. Test standards and requirements shall be uniformly implemented in accordance with the national standards for student physical fitness testing.

3.3 Analysis

Using relevant subject knowledge, a comprehensive analysis of the status of physical health of college students in higher TCM colleges and universities.

3.4 Mathematical Statistics

In order to ensure the scientificity and objectivity of the research and related issues are quantified, according to the principles and methods of sports statistics, the test scores of various indicators of physical fitness are counted, and mathematical statistics software is used to process and analyze the original data.

4. Results and analysis

4.1 2016—2019 Years Dynamic Analysis of College Students' Physical Quality Index in TCM Colleges

The "Standard" took the seats forward flexion, pull-ups (male), sit-ups (female) three indicators as the first type of test indicators; the second type to 50 meters and standing long jump two test indicators, "Standard" Through the testing of college students in the first and second categories of indicators, to analyze and discuss contemporary college students in theupper and lower limbs muscle strength, lower extremity explosive power to physical coordination and other capabilities [1].

4.1.1 Dynamic Analysis on the Index of Flexibility for College Students in TCM Colleges from 2016 to 2019

Flexibility is an important part of the body's physical fitness and it is of great significance in sports. It is defined as the range of motion of various joints in the human body and
The elasticity and stretching ability of soft tissues such as muscles, tendons and ligaments [2]. It includes the ability to obtain the magnitude of joint motion and the extensibility of soft tissues such as muscles and ligaments across joints, mainly through reasonable training.

Table 1. Table of Grades of Flexibility for Chinese University Students of TCM Academies (Male=2131; Female=4243)

Years	Evaluation index	Gender	Excellent	%	Good	%	Pass	%	Failed	%
2016		male	178	8.35	459	21.54	1236	58.00	258	12.11
		Female	459	10.82	1089	25.67	2267	53.43	428	10.09
2017	Sitting body flexion	male	183	8.59	421	19.76	1329	62.37	198	9.29
		Female	561	13.22	1134	26.73	2218	52.27	330	7.78
2018		male	168	7.88	357	16.75	1396	65.51	210	9.85
		Female	412	9.71	1175	27.69	2451	57.56	205	4.83
2019		male	167	7.84	331	15.53	1398	65.60	235	11.03
		Female	371	8.74	1025	24.16	2456	57.88	391	9.22

From Table 1, the excellent rates of the quality of male students in the universities of TCM colleges from 2016 to 2019 were 8.35%, 8.59%, 7.88% and 7.84%, respectively; 10.82%,13.22%, 9.71%, and 8.74%. The boys who failed in the four years' rate were 12.11%, 9.29%, 9.85%, and 11.03%; and the girls were 10.09%, 7.78%, 4.83%, and 9.22%. This set of data shows that the outstanding rate of flexibility of male and female students in TCM colleges and universities has been declining year by year. From 2016 to 2017, it may be due to the establishment of university

sports that the downward trend is not obvious, and the downward trend from 2018 to 2019 is obvious. The change. The failure rate of male and female students has been in an unstable state; it has been rising year by year.

4.1.2 2016—2019 Years Analysis on the Indexes of Sit-ups and Chin-ups in Students of TCM Universities

Strength is a manifestation of human motor skills. It is the ability to overcome resistance when the body or part of the body muscles contract and dilate; it has three factors, namely, the maximum contraction force of the active muscle; active muscle and antagonist muscle, neutral muscle, Supports the muscle's cooperative force; the muscle's pulling angle, and the relative length of the resistance arm and force arm of each lever [3].

Table 2. Grades of sit-ups and pull-ups for college students in Chinese medicine colleges from 2016 to 2019 (Male=2131; Female=4243)

Evaluation Index	Gender	Year	Excellent	%	Good	%	Pass	%	Failed	%
Pull-ups	male	2016	83	3.89	491	23.04	1239	58.14	318	14.92
		2017	88	4.13	289	13.56	1329	62.37	425	19.94
		2018	73	3.43	266	12.48	1327	62.27	465	21.82
		2019	67	3.14	259	12.15	1348	63.26	457	21.44
sit-ups	Female	2016	128	3.02	886	20.88	2606	61.42	623	14.68
		2017	160	3.77	834	19.66	2637	62.15	612	14.42
		2018	114	2.69	783	18.45	2556	60.24	780	18.38
		2019	104	2.45	731	17.23	2568	60.52	840	19.80

Table 2 shows that the excellent rate of pull-ups for male college students in TCM colleges and universities in 2016-2019 has increased compared to 2016 and has declined since 2017. The overall performance of college boys is excellent and good. The trend of student development, which does not pass rates, is declining year by year; the passing rate has been rising. In addition, during the period from 2016 to 2019, the university girls in TCM colleges and universities have the same tendency of good and good sit-ups and university boys, while the passing and failing rates are unstable, but the overall trend is downward.

4.1.3 Dynamic Analysis on Indexes of Standing Long Jump of College Students in TCM Colleges from 2016 to 2019

The reaction of the explosive power of the lower extremities is mainly accomplished by the test of standing long jump. The most typical manifestation is speed power. Speed power is defined as the ability to overcome certain resistance at the maximum speed in the shortest possible time. It can manifest itself in lifting objects, throwing objects in space, or moving the body. Its size lies in the correct combination of strength and speed[4]. According to Table 3, the outstanding explosiveness of male and female students in TCM colleges and universities was higher than that of 2017 in 2016, and there was a decline in 2018 and 2019.The overall development trend was downward. The number of passers handrails has been declining for the following three years compared with 2016.

Table 3. Grades of Standing Long Jump for College Students in TCM Colleges from 2016 to 2019 (Male=2131; Female=4243)

years \ Level	gender	Excellent		Good		Pass		Failed	
		≥255	250-254	239-249	227-238	220-226	195-219	≤194	
		n	%	n	%	n	%	n	%
2016		158	7.41	469	22.01	1389	65.18	115	5.40
2017	male	176	8.25	498	23.37	1309	61.43	148	6.95
2018		148	6.95	476	22.34	1351	63.40	156	7.32
2019		132	6.19	428	20.08	1355	63.59	216	10.14
		≥195	187-194	178-186	166-177	161-165	139-160	≤138	
		n	%	n	%	n	%	n	%
2016		383	9.03	614	14.47	3090	72.83	336	7.92
2017	Female	426	10.04	643	15.15	2904	68.44	270	6.36
2018		337	7.94	528	12.44	3001	70.73	377	8.89
2019		456	10.75	511	12.04	2364	55.71	469	11.05

4.1.4 2016—2019Analysis of the Dynamic Index of College Students in TCM Colleges

The 50-meter race mainly examines the speed of the university students, and the speed is the ability of the human body (or part of the body) to perform rapid movement or the ability of the human body to complete its movement in the shortest time[5]. It consists of three aspects, namely the ability to react quickly, the ability to complete actions quickly, and the ability to quickly pass a certain distance.

Table 4. Rankings of college students' speed (50m run) in TCM colleges from 2016 to 2019 (Male=2131; Female=4243)

Year	Gender	Rating Indicator	Good	%	Pass	%	Failed	%	Average
2016	male	50-meter race	621	29.14	1124	52.75	386	18.11	8.46
2017			737	34.58	1056	49.55	338	15.86	8.32
2018			594	27.87	1085	50.92	452	21.21	8.97
2019			524	24.59	1025	48.10	582	27.31	9.07
2016	Female	50-meter race	899	21.19	2743	64.65	601	14.16	9.66
2017			1041	24.53	2999	70.68	589	13.88	9.77
2018			906	21.35	2693	63.47	644	15.18	9.96
2019			807	19.02	2716	64.01	720	16.97	10.18

Speed is one of the basic qualities of individuals engaged in sports and plays an important role in physical training. Some sporting events are athletes' ability to move faster than others; some sports events, although not as fast as themselves, have a direct effect on athletic performance. As can be seen from Table 4, the 50-meter average scores of boys in TCM colleges and universities in 2016-2019 are 8.46s, 8.32s, 8.97s, and 9.07s, respectively, indicating that the average value has declined since the three years from 2016. The 50-meter runoff girls is even less optimistic. There is no rebound period in the middle of the period. The overall quality of college students in TCM colleges and universities declines, which shows that there are objective reasons in college physical education.

4.2 Dynamic analysis of total physical examination scores and average scores of college students in Chinese medicine universities from 2016 to 2019

The evaluation of the overall performance monitoring level of college students' physical fitness can objectively reflect the student's physical condition and grasp the effect of physical exercise in time[6], and can serve as an effective mechanism to urge students to participate in physical exercise and scientifically guide them to engage in physical activities. So as to continuously strengthen the

physique of college students.

Table 5. Statistics of the total physical examination grades and average scores of college students in Chinese medicine colleges from 2016 to 2019 (Male=2131; Female=4243)

Year	Gender	Excellent（%）	Pass（%）	Failed（%）	Average
2016	male	20.76	67.13	12.11	61.62
	Female	20.22	62.44	13.34	65.51
2017	male	17.47	79.24	3.29	62.53
	Female	25.91	68.76	5.33	64.42
2018	male	21.34	72.20	6.46	60.42
	Female	29.22	61.20	9.58	66.13
2019	male	19.71	74.15	5.94	59.14
	Female	27.23	61.18	11.59	67.16

Table 5 shows; from 2016 to 2019, the average scores of physical fitness tests for male college students in Chinese medicine colleges and universities were averaged 61.62 points, 62.53 points, 60.42 points, and 59.14 points. The disqualification rates were 12.11%, 3.29%, 6.46%, 5.94%. From the average score of the total score, it can be seen that its physical health development is not stable enough, and it has a downward trend after 2016; and the overall failure rate has improved significantly compared with 2016, but remains unstable. In 2016-2019, the average score of the physical health test for female students in colleges and universities of Chinese medicine colleges has always remained above 60, indicating that the physical fitness level of female students is better than that of male students; however, their pass rate has dropped significantly in 2016 and 2019.

Summary

The excellent rate of flexibility of male and female students in colleges and universities of Chinese medicine colleges is decreasing year by year, and the downward trend has changed significantly from 2018 to 2019. The excellent pull-up rate of boys has increased from 2017 compared to 2016, and then began to decline in the next two years; the excellent and good rate of girls' sit-ups is the same as that of college boys, and passing the failure rate is unstable, but the overall trend is declining. Students with excellent and good lower extremity power increased in 2014 compared to 2013, and there was a decline in 2018 and 2019; while the number of passing and failing numbers compared with 2016 has been declining for the next three years status. The average score of 50 meters has been declining from the three years after 2013; the performance of girls is even less optimistic. There is no rebound period in the middle and it has been declining. This shows that there have been problems in college physical education in recent years. Problems may have occurred in the content of teaching and curriculum settings, which has led to a decline in the overall speed and quality of students [7].

According to the overall score evaluation and average score, it can be seen that its physical health development is not stable enough, and it has a downward trend after 2017; and the overall failure rate has significantly improved compared to 2016, but remains unstable. The average score of the girls' physical fitness test has always remained above 60; however, the pass rate has dropped significantly in 2016 and 2019, which means that the physical health status of some female college students in Chinese medicine universities has declined. Schools have the responsibility to pay full attention to their development, and should not focus on the physical fitness test from simply improving the pass rate, but should turn to improving the overall rate [8].

Let students choose their favorite sports through the online course selection system of the physical education class according to their interests and hobbies [9]; to ensure that the system masters the basic technology of 1-2 sports events to lay the foundation for independent exercise in the future; in order to ensure that The needs of college students above grade 3 for sports are actively encouraging physical education teachers to apply for various elective sports courses. at the same time to ensure that Students can have plenty of time to participate in extra-curricular physical exercises and various sports competitions. It is recommended that schools set an hour of extra-curricular physical activities every day[10]. And through the
Regular holding of physical education cultural festivals in the school, on the basis of comprehensively enriching after-school life and expanding the school's fitness atmosphere and environment, vigorously promote the initiative of students to participate in sports. According to
the development and needs of the society, train college students' self-exercise, supervision, and evaluation capabilities; emphasize that students' fitness is the center, and under the guidance of physical education teachers or fitness instructors, comprehensively cultivate and develop students' awareness "self-reliance" in developing their fitness, Behavior and habits[10,11].

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