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Regress statistic analysis-based university students physical health and traditional Chinese medicine exercises correlation research

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ABSTRACT

Discuss traditional Chinese medicine exercises and university students' physical health relationship, apply documents literature, experiment method and mathematical statistics to analyze and research on university students physical health influence results. Conclusion is: before traditional Chinese medicine exercises, schoolboys' physical health tests total points influential main items are step test and standing long jump event, for schoolgirls, they are step test as well as sit and reach event. Traditional Chinese medicine long-term exercises have important impacts on university students heart rate, breathe, it can promote muscle and other organic activities functions, especially for fingers, arms and others strength, after exercising, physical health tests total points influential main items are grip strength, sit and reach as well as lung capacity weight index evaluation item. Traditional Chinese medicine exercises have insignificant impacts in improving step test and standing long jump results. Test data after dimensionless handling, by gradually regression analysis method to comprehensive evaluate university students' physical health test results that have practical implications.

KEYWORDS

Traditional Chinese medicine exercises; Physical health; Regression analysis; Sports medicine; Physiological indicator.

INTRODUCTION

Traditional Chinese medicine exercises are physical and psychological exercises methods of preventing diseases as well as venting diseases and prolonging life on the basis of Chinese medicine basic theories and traditional Chinese medicine exercises health maintenance and rehabilitation theories[1]. Basic contents of traditional Chinese medicine exercises, according to qigong exercises limbs are moving or not, they can divided into static exercise, dynamic exercise as well as static and dynamic combinative traditional exercises three types. Those mainly include psychosomatic relaxation, standing exercise, internal nourishing exercise, muscles exercises, muscle-bone strengthening exercise, five-animal exercises, eight trigrams boxing and medical treatment exercises and so on[1]. Traditional Chinese medicine exercises have good functions of body building and disease preventing, obvious train and enhance human muscle strength and splanchnic functions, their main features have four points: guild health maintenance and rehabilitation work based on traditional Chinese medicine basic theories; focus on "Yi", "Qi", "Strength" the three combinative coordination and unification; strive for fusing "movement", "application" and "medical knowledge"; combine doctor with patient exercises, preserve health in case have no diseases, prevent diseases and cure of disease, enhance curative effect[1]. Traditional Chinese medicine exercises have a profound history and have deep ancient origins with Chinese old " Tao Yin". With the development of times, it gradually evolves, under the close attentions of party and government, strength are organized to sort out, let traditional Chinese medicine treatment workers to get further acknowledgement, and play important roles in body building, guiding patients to do functional exercises and promoting medical treatment effects[2]. Traditional Chinese medicine exercises have already organized for above 20 years in our school, plentiful teaching basis and experiences have been accumulated, in order to make quantization on traditional Chinese medicine exercises impacts on university students physical health, it organizes recent two sessions of students to do physical health testing before and after traditional Chinese medicine exercises training, by quantizing traditional Chinese medicine exercises training impacts on students physical health, it provides experiment data of reference values for its teaching. By documents literature, it finds that during experiment training comparison research, adopts regression analysis method to make indicators comparison and effects analysis are rarely, so the research tries to adopt regression analysis method to study on traditional Chinese medicine exercises training impacts on university students' physical health.

RESEARCH OBJECTS AND METHODS

It takes acupuncture and tuina specialized students as research objects. According to research demand, consult traditional Chinese medicine exercises, traditional Chinese medicine rehabilitation theory, health-care qigong, physiology, students' physical health test and other aspects literatures, and collect traditional Chinese medicine exercises curriculum teaching contents, teaching plan and other information. According to school syllabus, bring investigation experiment objects into traditional Chinese medicine exercises training. The sampled experiment students haven't learnt traditional Chinese medicine exercises, have no heart-lung and serious diseases as TABLE 1.

TABLE 1 : Experiment investigation objects basic information table

Grade	Gender	Investigation object	Number of people	Average age
Grade 2011	Man	Students major in acupuncture and tuina, health-care department	35	20.23
	Woman	Students major in acupuncture and tuina, health	45	19.67
Grade 2012	Man	Students major in acupuncture and tuina, health	50	20.48
	Woman	Students major in acupuncture and tuina, health	50	19.73

During experiment period, except for training teaching contents, it doesn't encourage students to participate in other sports activities after class. For experiment environment control, before experiment

teaching, experiment objects go ahead with necessary health education, and they are required to get rid of drinking, and try to keep the same living habits at ordinary times. Testers carry on unified training, master testing methods, and ensure before and after testing time and methods consistency, try to reduce errors. For testing methods control, testing methods select national ministry of education, general administration of sport "university students physical health criterion" evaluation method according to sports metrology and "human sports ability test and assessment". Test instrument selects physical health criterion evaluation system from Guangzhou HengKang WeiYe educational technology limited company. Test error is within prescribed limit of national ministry of education, general administration of sport "Students physical health criterion". Investigation experiment objects respectively organize training and testing in order in regulated time. Main test items include standing long jump item, step test item, lung capacity weight index evaluation item, grip strength item as well as sit and reach item. Traditional Chinese medicine teaching contents arrangement is as TABLE 2 shows.

TABLE 2 : Traditional Chinese medicine exercises teaching hour distribution plan status table

Teaching contents	First term	Second term
Traditional Chinese medicine exercises basic theoretical knowledge	2 class hours	
Psychosomatic relaxation	5 class hours	
Muscles exercises	10 class hours	
Internal nourishing exercise	10 class hours	
Muscle-bone strengthening exercise	38 class hours	
Five-animal exercises		10 class hours
Eight trigrams boxing		10 class hours
Medical treatment exercise for preventing and curing neck and shoulder pain		10 class hours
Medical treatment exercise for preventing and curing lumbago and backache		10 class hours
Medical treatment exercise for preventing and curing hip leg lower limbs pain		10 class hours
Medical treatment exercise for preventing and curing limbs and arthrodynia		10 class hours
Medical treatment exercise for preventing and curing visceral dysfunctions		5 class hours
Total	65 class hours	65 class hours

Use SPSS16.0 statistic software, adopt regression analysis method to analyze data after dimensionless handling, adopt matching sample t test to verify regression analysis result reliability.

RESEARCH RESULT AND ANALYSIS

Before and after traditional Chinese medicine exercises training physical health test result preliminary sorting and analyzing

Before traditional Chinese medicine exercises training, organize experiment objects to do the first time physical health test. After experiment teaching, organize the second time physical health test. It mainly takes traditional Chinese medicine exercises curriculum contents to teach, curriculum total class hours are 130 class hours and fulfill in two terms, every term 65 class hours, teaching time is arranged to start from the second week since the second academic year every term starting, and end in the 14^{th} week, before and after experiment test status is as TABLE 3. According to TABLE 3, it is clear that :(1)Grade 2011, grade 2012experiment objects after traditional Chinese medicine exercises training, test average value has larger differences in lung capacity weight index indicator, sit and reach indicator and grip strength weight index indicator, after experiment test result is higher than that before experiment, test results have obvious linear changes, $P<0.05$, it has significant differences. (2)After traditional Chinese medicine exercises training, experiment objects' test average value has insignificant changes in step test indicator and standing long jump indicator, before and after experiment test linear correlation degree is lower, $P>0.05$, it has no significant differences.

TABLE 3 : Grade 2011, grade 2012 students' physical health test status table

Grade		Grade 2011				Grade 2012			
Gender		Man		Woman		Man		Woman	
Test times		The first time	The second time	The first time	The second time	The first time	The second time	The first time	The second time
A	Average value	54.48	77.26	43.81	47.32	64.96	73.84	44.79	49.82
	Standard deviation	15.34	13.22	12.94	11.49	13.16	15.07	10.25	13.26
	T	0.00		0.02		0.05		0.03	
B	Average value	55.05	57.14	51.68	52.06	55.45	52.96	50.45	49.13
	Standard deviation	8.08	6.06	6.29	5.98	5.62	5.47	5.60	4.26
	T	0.39		0.49		0.32		0.41	
C	Average value	2.14	2.22	1.57	1.65	2.16	2.22	1.66	1.72
	Standard deviation	0.21	0.20	0.20	0.10	0.20	0.30	0.11	0.18
	T	0.11		0.25		0.13		0.18	
D	Average value	17.94	19.12	16.94	20.79	20.03	22.40	19.84	22.14
	Standard deviation	7.03	6.19	5.32	5.52	6.10	6.65	5.48	4.76
	T	0.04		0.00		0.03		0.02	
E	Average value	68.34	75.82	44.08	57.41	65.64	74.34	56.32	66.46
	Standard deviation	9.27	9.32	5.32	6.38	8.60	8.97	5.37	8.12
	T	0.04		0.00		0.02		0.01	

Note: A represents lung capacity weight index indicator; B represents step test indicator; C represents standing long jump indicator; D represents sit and reach indicator; E represents grip strength weight index indicator.

Regression theory-based before traditional Chinese medicine exercises training university students' physical health test result analysis

Regression analysis is a kind of widely used quantity analysis method that is used to analyze statistical relationships among analyzed things, it lays particular emphasis on variables quantity changes rules, and describes and reflects the relationship by regression equation form, helps people to correct grasp variables affected degree by other one or multiple variables, and further provides scientific evidence for prediction. According to document literature, the paper finds that before and after experiment teaching status comparative research mainly adopts matched sample T test method, the paper tries to adopt stepwise regression analysis method here to make statistical analysis of university students physical health test each indicator data, explores stepwise regression analysis method application in before and after experiment teaching comparative researching.

In research, due to test item unit is different; the paper carries on dimensionless handling with test data. Therefore, regression coefficient calculated by regression analysis method can be used as weight coefficient, and then it can judge test item impact degree and importance degree to test results.

Before traditional Chinese medicine exercises training, carry on physical health test on 35 schoolboys of grade 2011 and 50 schoolboys of grade 2012 that both major in acupuncture and tuina, health-care department. The paper explained variable Y value is total points of schoolboys test, other five items test indicators are explanatory variable X, multiple correlation coefficient representative explanatory variable X and explained variable Y correlation degree, it gets closer to 1, then it shows the two correlation degree is higher[4]. According to linear regression test, it is clear (TABLE 4):(1)Model 1 completes prediction model through 1 step, it is composed of explanatory variable as step test indicator ;Model2 completes prediction model through 2 steps, its explanatory variable is composed of step test indicator and lung capacity weight index evaluation indicator; Model 3 completes prediction model through 4 steps, its explanatory variable is composed of step test indicator, lung capacity weight index evaluation indicator, standing long jump indicator and grip strength indicator; Model 4 completes prediction model through 5 steps, its explanatory variable is composed of step test indicator, standing

long jump indicator, lung capacity weight index evaluation indicator, grip strength indicator as well as sit and reach indicator. (2)According to 4pieces of model multiple correlation coefficient, determination coefficient and adjusted determination coefficient comparison, the fourth model multiple correlation coefficient is 0.872, determination coefficient is 0.761, adjusted determination coefficient is 0.755, all are higher than other three models, goodness of fit is higher, finally it defines to adopt the fourth model to make regression equation[2].

According to university student physical health test each test event and test total score variance analysis, it is clear (the table omits) : the fourth model regression equation, all significance test probabilities P value is less than 0.05, explained variable and explanatory variable linear relationship is remarkable, it can establish linear model.

Therefore, before traditional Chinese medicine exercises schoolboys physical health test result regression model factor includes step test indicator, standing long jump indicator, lung capacity weight index evaluation indicator, grip strength indicator as well as sit and reach indicator.

TABLE 4 : Before traditional Chinese medicine exercises training schoolboys physical health test result linear regression model statistical test

Model	Multiple correlation coefficient	Determination coefficient	Adjusted determination coefficient	Regression equation's estimation standard error
1	0.547	0.299	0.295	9.703
2	0.781	0.609	0.605	7.264
3	0.836	0.699	0.694	6.392
4	0.872	0.761	0.755	5.717

a. Prediction: step test indicator; b. Prediction: step test indicator, lung capacity weight index evaluation indicator; c. Prediction: step test indicator, lung capacity weight index evaluation indicator, standing long jump indicator, grip strength indicator; d. Prediction: step test indicator, lung capacity weight index evaluation indicator, standing long jump indicator, grip strength indicator, sit and reach indicator; e. Dependent variable : Test total points

TABLE 5 : Before traditional Chinese medicine exercises training schoolboys physical health test result test total points coefficient check list

Model	Nonstandardized coefficient		Standardized partial regression coefficient	Significance test T statistical quantity observation value	Corresponding probability P
	Partial regression coefficient	Partial regression coefficient standard deviation			
Constant term	-10.484	4.136		-2.535	0.012
X1. step test indicator	0.421	0.029	0.528	14.492	0.000
X2. standing long jump indicator	0.261	0.019	0.497	13.469	0.000
X3. lung capacity weight index evaluation indicator	12.766	1.713	0.277	7.451	0.000
X4. grip strength indicator	0.456	0.066	0.252	6.894	0.000
X5. sit and reach indicator	0.326	0.032	0.148	5.304	0.000

By above regression analysis, it is clear :(1)Before traditional Chinese medicine exercises training, schoolboys physical health test main influence factor is step test indicator (weight coefficient is 0.528)and standing long jump indicator (weight coefficient is 0.497).(2)Step test indicator is mainly used to evaluate students' heart and blood vessels functions, is quantitative stress test designed by American Harvard University fatigue laboratory in 1942[5]. Step test index gets bigger shows that heart and blood vessel function level gets higher, corresponding aerobics capacity level gets higher. When respondents carry on quantitative work, heart and blood vessels functions have features of quick mobilization, big potentials and rapid recovery, since movement starts, it can fast mobilize heart and

blood vessels functions to adapt to movement demands, recovery period after movement is shorter. (3)Standing long jump indicators mainly reflects human lower limbs explosive powers. Standing long jump results get better; it shows human lower limbs explosive powers are stronger. Respondents before traditional Chinese medicine exercises have certain lower limbs explosive powers, ankle joint, shank strength are stronger.

Before traditional Chinese medicine exercises, carry on university students physical health test on 45 schoolgirls of grade 2011 and 50 schoolgirls of grade 2012 that both major in acupuncture and tuina, health-care department. Here explanatory variable Y value is total points of testees, explanatory variable X are five items test indicators. According to linear regression test, it is clear (the table omits):utilize stepwise screening strategy by one step, it fulfills regression equation establishment, multiple correlation coefficient is 0.877, determination coefficient is 0.77, adjusted determination coefficient is 0.767. According to university student physical health test each test event and test total score variance analysis, it is clear that the model regression equation significance test probability P value is less than 0.01, explained variable and explanatory variable linear relationship is remarkable, it can establish linear model. Therefore before traditional Chinese medicine exercises schoolgirls physical health test result regression model factor includes step test indicator, standing long jump indicator, lung capacity weight index evaluation indicator, grip strength indicator as well as sit and reach indicator.

According to test total points coefficient test status, it is clear that (TABLE 6): constant term B is 30.125, explanatory variable X_1 is 0.88, X_2 is 0.372, X_3 is 0.268, X_4 is 0.42, X_5 is 0.243. Therefore, before traditional Chinese medicine exercises training schoolgirls physical health test total points regression equation is :$Y=30.125+0.88X_1+0.372X_2+0.268X_3+0.42X_4+0.243X_5$.

TABLE 6 : Before traditional Chinese medicine exercises training schoolgirls physical health test result test total points coefficient check list

Model	Nonstandardized coefficient		Standardized partial regression coefficient	Significance test T statistical quantity observation value	Corresponding probability P
	Partial regression coefficient	Partial regression coefficient standard deviation			
Constant term	30.125	6.903		4.364	0.000
X1. step test indicator	0.425	0.074	0.880	5.740	0.000
X2. lung capacity weight index evaluation indicator	0.340	0.018	0.372	19.337	0.000
X3. standing long jump indicator	0.462	0.034	0.268	13.704	0.000
X4. sit and reach indicator	23.081	1.117	0.420	20.665	0.000
X5. grip strength indicator	12.435	1.015	0.243	20.665	0.000

By above regression analysis, it is clear that:(1)Before traditional Chinese medicine exercises training, schoolgirls physical health test total points important influential factors are step test indicator (weight coefficient is 0.88) and sit and reach indicator (weight coefficient is 0.42).(2)Before traditional Chinese medicine exercises training, schoolgirls that major in acupuncture and tuina, health-care department, their heart and blood vessels function levels are good, potential is big, oxygen utilization rate in unit time is good. (3)Respondents sit and reach indicator test shows good results, which reflects their corresponding trunk, waist, hip and other joints activity range is bigger, muscle extensibility and elasticity are good, body flexibility quality development level is higher.

Regression theory-based after traditional Chinese medicine exercises training university students' physical health test result analysis

After traditional Chinese medicine exercises training, the paper carries on physical health test on students. Adopt stepwise regression analysis method to analyze data after testing. By after traditional Chinese medicine exercises training schoolboys physical health test results linear regression model

statistical test, it is clear (the table omits): utilize stepwise screening strategy, it fulfills regression equation establishment by four steps, the fourth model multiple correlation coefficient is 0.908, determination coefficient is 0.824, adjusted determination coefficient is 0.821, all are higher than other three models, finally define to adopt the fourth model to make regression equation. According to university students physical health test each item and test total points variance analysis, it is clear:the fourth model regression equation, significance test probability P value is less than 0.05, linear relationship is remarkable, it can establish linear model. Therefore, after traditional Chinese medicine exercises training, schoolboys physical health test result regression factors include grip strength indicator, sit and reach indicator, lung capacity weight index evaluation indicator, step test indicator and standing long jump indicator.

According to test total points coefficient test status, it is clear that (TABLE 7): constant term B is -23.06, explanatory variable X_1 is0.606, X_2 is 0.45, X_3 is 0.395, X_4 is 0.279, X_5 is 0.183. Therefore, after traditional Chinese medicine exercises training schoolboys physical health test total points regression equation is :$Y=-23.06+0.606X_1+0.45X_2+0.395X_3+0.279X_4+0.183X_5$.

TABLE 7: After traditional Chinese medicine exercises training schoolboys physical health test result total points coefficient check list

Model	Nonstandardized coefficient		Standardized partial regression coefficient	Significance test T statistical quantity observation value	Corresponding probability P
	Partial regression coefficient	Partial regression coefficient standard deviation			
Constant term	-23.060	3.970		-5.808	0.000
X_1 grip strength indicator	0.422	0.022	0.606	19.568	0.000
X_2 sit and reach indicator	21.574	1.509	0.450	14.299	0.000
X_3 lung capacity weight index evaluation indicator	0.196	0.016	0.395	12.284	0.000
X_4 step test indicator	0.395	0.044	0.279	8.887	0.000
X_5 standing long jump indicator	0.274	0.032	0.183	7.353	0.000

By above regression analysis, it is clear:

1) After traditional Chinese medicine exercises training schoolboys physical health test result total points important influence factors are grip strength indicator (weight coefficient is 0.606)), sit and reach indicator (weight coefficient is 0.45) and lung capacity weight index evaluation indicator (weight coefficient is 0.395).

2) Strength is a kind of functional ability that represents during muscle tension or contraction. Grip strength is common term of upper limbs strength test. Grip strength can reflect forearm and hand flexor group static force kind of strength. After traditional Chinese medicine exercises training, schoolboys grip strength results obviously improve, it becomes most important factor that affects test total points, weight coefficient arrives at 0.606. In traditional Chinese medicine exercises, many contents have important impacts on improving students strength quality, one of features in traditional Chinese medicine exercises is strengthening body far-end facet joint and facet muscle group activities. In Yi Jin-Jing teaching twelve movements, it highlights body movement and breathe adjustment, such as the fifth movement Pulling Nine Cows by Their Tails, the sixth movement Showing Talons and Spreading Wings, and the ninth movement Black Dragon Displaying Its Claws, these movements focus on arm muscle group balanced exertion, Showing Talons and Spreading Wings movement requires two hands' ten fingers to make powerful external division, exert strength to string finger terminal[6]. Therefore, traditional Chinese medicine exercises training is of remarkable help to improve students' grip strength.

3)Sit and reach is one of flexibility quality measurement and evaluation method, flexibility refers to joint, muscle, tendon and ligament extension ability when human fulfills movement[7]. Sit and reach indicator weight coefficient arrives at 0.45, is one of test total points important influence factors. In

traditional Chinese medicine exercises, lots of movements require twist, turning waist, body forward bending, body lateral bending and so on, these movements mainly exercise waist bilateral muscle and sacrum muscle, quadrates lumborum, latissimus dorsi and so on, let spine to pull and stretch and bend lateral, which plays roles of bonesetting and tendon regulation. Traditional Chinese medicine exercises training is of important help to schoolboys sit and reach indicator result, lots of movements in traditional Chinese medicine exercises training has important impacts on stretching muscles, training connective tissue and improving muscle relaxing ability.

4)In traditional Chinese medicine exercises training, for regulating Xi, "Xi" refers to breath, when make rising, opening movements, it cooperates with expiration, when make declination, closing or force palm movements, it cooperates with expiration, and breathless when remain stretching or balance movements[8]. In exercising process, adopt reverse abdominal breathing, it can improve whole body qi and blood circulation, and adjust human body respiratory system[9]. Therefore, traditional Chinese medicine exercises can significant impact on lung capacity weight index evaluation indicator result.

The paper carries on physical health test on schoolgirls after traditional Chinese medicine exercises. By after traditional Chinese medicine exercises training schoolgirls physical health test results linear regression model statistical test, it is clear (the table omits): utilize stepwise screening strategy, it fulfills regression equation establishment by four steps, the fourth model multiple correlation coefficient is 0.917, determination coefficient is 0.84, adjusted determination coefficient is 0.839, all are higher than other three models, finally define to adopt the fourth model to make regression equation. According to variance analysis, it is clear:the fourth model regression equation, significance test probability P value is less than 0.05, linear relationship is remarkable, it can establish linear model. According to test total points coefficient test status, it is clear that (TABLE 8): constant term B is 25.55, explanatory variable X_1 is0.436, X_2 is 0.351, X_3 is 0.26, X_4 is0.27, X_5 is0.148. Therefore, after traditional Chinese medicine exercises training schoolgirls physical health test total points regression equation is : $Y=25.55+0.436X_1+0.351X_2+0.32X_3+0.27X_4+0.148\ X_5$.

TABLE 8: After traditional Chinese medicine exercises training schoolgirls physical health test result total points coefficient check list

Model	Nonstandardized coefficient		Standardized partial regression coefficient	Significance test T statistical quantity observation value	Corresponding probability P
	Partial regression coefficient	Partial regression coefficient standard deviation			
Constant term	25.550	5.783		4.418	0.000
X_1 lung capacity weight index evaluation indicator	25.805	0.962	0.436	26.838	0.000
X_2 grip strength indicator	0.317	0.014	0.351	22.390	0.000
X_3 sit and reach indicator	0.407	0.025	0.320	16.333	0.000
X_4 step test indicator	0.149	0.070	0.270	2.125	0.034
X_5 standing long jump indicator	0.104	0.008	0.148	3.431	0.001

By above regression analysis, it is clear :

1) After traditional Chinese medicine exercises training schoolgirls physical health test result total points important influence factors are lung capacity weight index evaluation indicator, grip strength indicator and sit and reach indicator, the three items weight coefficients are respectively 0.436, 0.351, 0.32 .

2) Traditional Chinese medicine exercises training highlights "regulating body", "regulating breathe" and "regulating heart", adjustment of the three has important adjusting functions on limbs, visceral exercising, it requires to relax naturally, keep mental calm, omphaloskepsis, training for long –term has impacts on heart rate and breathing[10], therefore it has significant impacts on schoolgirls lung capacity weight index evaluation item.

3)Lots of movement in traditional Chinese medicine exercises require upper limbs, lower limbs, trunk to fully flex and extend, abduct and rotate and so on, let body joint to present multi-orientation, angular activities, improve muscle and other organization activity functions, which can achieve the purpose of practicing outside bones, therefore it has significant impacts on schoolgirls sit and reach indicator.
4)Traditional Chinese medicine exercises training has obvious requirements on fingers, arms and other strength, lots of movement fulfillment relies on arms, fingers supporting strength, and long-term auxiliary training is of significant help to wrists strength, such as to fulfill movement of "a hungry tiger at its prey", teachers will arrange some push-up, finger up exercises[11]. Therefore it has significant impacts on schoolgirls grip strength indicator.
5)Traditional Chinese medicine exercises have no significant impacts on step test indicator. Step test indicator is mainly used to evaluate students heart and blood vessels functions, is quantitative stress test designed by American Harvard University fatigue laboratory in 1942[5]. Traditional Chinese medicine exercises focus on "Yi", "Qi", "Strength" the three coordination, is a kind of psychological and physical exercising technology, its movement features are gentle and slow, combining static with dynamic, laying equal importance on exercising and maintenance, extending limbs and strength muscles and pulling bones and so on, traditional Chinese medicine exercises training contents cannot significant affect step test indicator result.
6)Traditional Chinese medicine exercises have no significant impacts on standing long jump indicator. In traditional Chinese medicine exercises, there is standing exercise, and some steps exercises, and these exercises can simulate lower limbs muscle strength, exercisers in the first time can feel thigh part muscle pain, but these exercises have no significant impacts on improving lower limbs explosive powers, traditional Chinese medicine exercises training has no significant functions on changing lower limbs muscle strength biology factors.

CONCLUSION

1) Before traditional Chinese medicine exercises schoolboys physical health test total test points important influential factors are step test indicator and standing long jump indicator. When respondents carry on quantitative work, heart and blood vessels functions have features of quick mobilization, big potentials and rapid recovery, and respondents have certain lower limbs explosive powers, ankle joint, shank strength are stronger.
2)Before traditional Chinese medicine exercises schoolgirls physical health test total test points important influential factors are step test indicator and sit and reach indicator. Respondents' heart and blood vessels function levels are good, oxygen utilization rate in unit time is good, and respondents' trunk, waist, hip and other joints activity range is bigger, muscle extensibility and elasticity are good, and body flexibility quality development level is higher.
3)After traditional Chinese medicine exercises training schoolboys physical health test result total points important influence factors are grip strength indicator, sit and reach indicator and lung capacity weight index evaluation indicator. Traditional Chinese medicine exercises training strengthens body far-end facet joint and facet muscle group activities, improves students finger, wrist, arm strength. Traditional Chinese medicine exercises can stretch muscles, training connective tissue and improving muscle relaxing ability, which is of important help to schoolboys sit and reach indicator result improvement. Long term and regular take traditional Chinese medicine exercises are of great help to increase lung capacity and control weight; it can improve whole body qi and blood circulation, and adjust human body respiratory system and each tissue and organ physiological functions.
4)After traditional Chinese medicine exercises training schoolgirls physical health test result total points important influence factors are lung capacity weight index evaluation indicator, grip strength indicator, as well as sit and reach indicator . Traditional Chinese medicine exercises training requires relax naturally, keep mental calm, omphaloskepsis, training for long –term has impacts on heart rate and breathing. Lots of movements in traditional Chinese medicine exercises let body joint to present multi-orientation, angular activities, it can improve muscle and other organization activity functions, and

further has impacts on sit and reach item result; traditional Chinese medicine exercises training has obvious requirements on fingers, arms and other strength, lots of movement fulfillment relies on arms, fingers supporting strength, and finally it affects grip strength event test result.

5) Traditional Chinese medicine exercises training has no significant impacts on step test indicator and standing long jump indicator. Traditional Chinese medicine exercises training is based on the theory of Yin and Yang and five element, and meridian theory[1], its movement features are gentle and slow, combining static with dynamic, laying equal importance on exercising and maintenance, extending limbs and strength muscles and pulling bones and so on, traditional Chinese medicine exercises training contents cannot significant affect step test indicator and standing long jump indicator result.

6) According to before and after traditional Chinese medicine exercises training results, the paper adopts paired sample t test methods analysis, it gets that traditional Chinese medicine exercises training has significant impacts on university students physical health test sit and reach indicator, lung capacity weight index evaluation indicator and grip strength indicator, while has no significant impact on step test indicator and standing long jump indicator.

7)The paper explores a kind of new comprehensive evaluation method about traditional Chinese medicine exercises impacts on university students physical health test result, by paired sample t test, it verifies that adopt regression analysis method to research traditional Chinese medicine exercises impacts on university students physical health has certain reliability. Test data after dimensionless handling, by gradually regression analysis method to comprehensive evaluate university students' physical health test results that have practical implications.

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