Investigation of Current Physical Activity Situation of China's Administrator in Universities

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ABSTRACT: literature, questionnaire and mathematical statistics are used to study the physical activity of 2215 administrator from 140 universities in this paper. According to the analysis on influence factor, the paper aims to know the real situation of the sports exercise in the group. The statistical results show that the group to take part in physical activity situation is quite pessimistic, about 1/3 of the administrator has never participated in any form of physical activity; about 44% of the executive body are mild or severe obesity.
KEYWORDS: colleges and universities; administrator; physical activity

The comprehensive quality of college administrator directly affects the quality of university education, and their health level also plays an indirect effect on the education. It is known to all that the management staff is busier than teaching staff in long working hours, high strength and heavy task. Therefore, their intensity of their work is very easy to cause physical fatigue and damage, and the nature of the work directly decide they don't have enough time to do sports to improve their health level. At the same time, the behavior of administrator is not conducive to the university sports exercise atmosphere. New research shows that colleges and universities administrators who are participate in sports activities have an effect on all the teachers and students in colleges and universities and also can drive the launch of sports.[1,2]

Physical activity is an effective way in preventing the disease and improving the health level [3]. Participate in sport activities usually can be used to predict a person's health condition. Therefore, people participate in sport activities have given wide attention by the international and domestic sport and health experts, and have taken various forms and means to promote people to participate in physical activities. However, the situation of the administrator to participate in sports activities is not optimistic and still has not taken seriously. In order to help improve the health level of our country's administrator and comprehensively carry out further activities, thus improve the quality of university education, this paper focuses on the research on the administrator of participating in sports activities, and other factors related to the research in the existing sports activities.

1 OBJECT AND METHOD OF STUDY:

1.1 *Research subjects:*

A total number of 2215 colleges and universities administrator was participated in the survey, which was included in 1840 men, accounted for 83.1%, and women 375, accounted for 16.9%. The average age of the study participants was about 45years old.

Table 1 Basic conditions of samples

Factor	samples (%)	mean
Age		45.4（5.3）
>56	275(12.4)	
46-55	1190(53.7)	
<45	750(33.9)	
Gender		
Female	375(16.9)	
Male	1840(83.1)	
Body mass index		
Weight qualified group	1240(56)	
Body weight of obese group	975(44）	
Self evaluation of health		
Bad	500(22.6)	
Great	1325(59.8)	
Good	390(17.6)	
The times to take part in PA		
Never	185(8.4)	
Sometimes	965(43.6)	
Often	1065(48.1)	
The degree of satisfaction with the sports venues and facilities		
Not satisfied	265(12.0)	
Satisfied	945(42.7)	
Very satisfied	1005(45.4)	
Metabolic equivalent (MET)		
Never	615(27.8)	0
MVPA	1600(72.2)	13.4(12.9)
The total MET		21.2(14.6)

1.2 *Research methods*

1.2.1 *Literature research method:*

Search the related information in magazines and the Internet, information on the National Library Database in area of sports, a collection of sports sociology, sports psychology and sports behavior, besides, the research methods and research results are analyzed and summarized which provide a theoretical basis for the design and the implementation of this task.

1.2.2 *Questionnaire survey:*

A total number of 2215 questionnaires were issued, 2196 were recovered, and 2168 are effective questionnaires (98.7%). Questionnaire is composed of two parts. The first part is about the individual situation, including gender, age, height and weight (used to calculate body mass index), the evaluation of university age to participate in physical activity situation, evaluation, the self health level of satisfaction degree of sports venues and facilities. The second part is the one which has been previous research validated and translated into Chinese about one week sports activities questionnaire. At present, the questionnaire has been widely used at home and abroad. The validity and reliability have been reported [4].

1.3 *Study of related variables:*

According to the aim of the research, this paper adopts the following three kinds of variables: first, the amount of physical activity. This paper uses two variables to measure the amount of physical activity: ① The medium intensity physical activity energy metabolic equivalent (MET); ②Equivalent physical activity energy metabolism in general (MET). The effect of different intensity of physical activity on the human body is different, so the strength of the sports practice time is not the simple sum. In order to study the combined effects of all kinds of sports activities on the human body, the universal energy metabolic equivalents (MET: Metabolic Equivalent of international Energy) to convert. Energy metabolic equivalent (MET) is based on a quiet, sitting energy consumption, commonly used index relative energy metabolism level expression of all kinds of activities. 1metabolic equivalent (MET) activity was slightly higher than the basal metabolism of healthy adults; the metabolic level corresponds to the healthy adults while he or she is sitting quietly.). The little strength, a lasting time more than 30 minutes of strength, high intensity physical activity are respectively equal to 3, 5, 9 energy metabolic equivalent (MET) [4]

① The large and medium intensity physical activity: it refers to the amount of energy metabolic equivalent in strength and high intensity exercise (MET) sum. For example, one a week in training high strength two times lasting more than 30 minutes and three times for 30 minutes or more, the total energy metabolic equivalent medium strength of the man (MET) is 2 × 5+3 × 9=37. Large and medium intensity exercise was found to be the most positive effect on the health of physical activity; ②The total amount of physical activity, although large and medium intensity physical activity is a very important physical activity variables, but the variables represent the overall activities of a person's weight, the equivalent of all the energy metabolism, the sum of the strength (MET).

The second kind of variables is the individual variables: gender, age, height, weight. The age variables were divided into 3 groups - [age <45,age =46-55,age>56]. Because the female proportion is too small, so the variables of gender are not statistical processing.

The third kind of variables is the factors of participation in physical activity: the situation of participation in physical activity in university age, evaluation of participation in physical activity, the self health satisfaction for sports facilities.

2 RESULTS AND ANALYSIS

2.1 *Body mass index of administrator in colleges and universities (BMI)*

Body mass index (BMI) is closely related with the total body fat index, mainly reflect systemic overweight and obesity. BMI<25 belongs to the normal range, BMI>25 belongs to the obese, more than 30 is obesity. Previous studies showed that the height body mass index (BMI) and is closely related to health. Body mass index (BMI) greater than 25, there are potential health crisis. The investigation results show that, with the administrator of 43.8% of body weight, which is not conducive to health, the specific circumstances in table 1. This group is in urgent need of effective weight control interventions.

2.2 *The university administrator participants in large and medium intensity and the total sports situation*

The administrators in Institutions who take part in higher learning in large and medium intensity and total physical activity are shown in table 2. Specifically, the university administrator in 27.8% of the only little strength or completely did not participate in any activities. In addition, the average energy metabolic equivalent medium intensity (MET) is 13.4MET. Because of a little strength in more than 30 minutes of exercise is equal to 3 MET[4]. So, in order to calculate the most conservative, the sample of university administrator attends the small intensity exercise in a week about 5

times. According to the 1 hours of exercise per day is recommended by the state, the administrator averaged less than the recommended standard. In addition, the results of variance analysis showed that age to participate in the large and medium strength [F (2442) =6.1, P < 0.01, =0.03] effect size and the total amount of physical activity [F (2442) =3.7, P < 0.05, there is significant effect of weight =0.02]. The results of this study show that 45 years old of the following administrative person to participate in the large and medium intensity physical activity and total physical activity were lower than those in the 46-55 age group, but higher than the age group over 56 years old. The reason may be the 45 age groups concerned about the extent of health crisis is low, the specific circumstances in table 1.

Table 2 Effect of age physical activity on MET

Factor	Samples	MVPA	Total
age			
<45	750	12.9(12.1)a	21.8 (15.4)*
46-55	1190	14.8(14.0)b	22.2(15.0)*
>56	275	8.3(7.9)ab	16.3(14.6)*

Note: a = p<0.05, b = p <0.001, * = p < 0.05

2.3 *Effects of university age to participate in sports activities experience for the administrator now in the large intensity and the total amount of physical activity*

The results of variance analysis show that, before taking part in physical activity on physical activity experience total now university administrator have significant differences [F (2442) =2.89, P < 0.05, =0.01], the large and medium intensity physical activity, there was significant difference between them. [F (2442) =3.20, P < 0.05, =0.01]. The University time to participate in physical activity at least or never attend physical training person in the exercise the most, notably in the university sometimes participate in physical activity staff currently participating in physical activity at least. In the past people often take part in physical activity is in the second. The specific circumstances in table 3.

Table 3 University times in the effect of physical activity on MET

Factor	Samples	MVPA	Total
Never	185	15.2(2.1)	23.1(12.1)
Sometimes	965	11.6(0.9)*	19.4(15.5)*
Often	1065	14.7(0.9)*	22.6(14.0)*

* = p < 0.05

2.4 *Effect of BMI on large and medium intensity and total physical activity*

Although body mass index did not differ significantly for large and medium intensity and general physical activity, overweight group participating in physical activity is still higher than the weight of qualified group, suggesting that overweight managers have realized the positive significance of physical activity on weight control. Previous research indicates that physical activity is only indirectly affect a person's height and weight index, diet and nutrition is another important variable height and weight index. Because of this topic not diet data, research on this variable has the limitation, the future will exercise and nutrition two factors together more in-depth and comprehensive study of this group body mass index. The specific circumstances in table 4.

Table 4 Effect of BMI on MET

Factor	Samples	MVPA	Total
Qualified group	1245	12.3(12.3)	19.7(14.7)
Obese group	970	14.8(13.5)	23.2(14.2)

2.5 *Self evaluation of health effects on sports activities and medium intensity and total.*

The results showed that no significant difference of self health assessment for large and medium intensity, but for the total amount of physical activity [F (2442) =8.9, P < 0.01, effect =0.04]. This is a different effect for large and medium intensity and total physical activity variables only, the total amount of physical activity in self evaluation of health bad or worse than the self evaluation of health staff, good staff, and good staff but lower than self evaluation. The fear is self health evaluation of the best staff but always in the least amount of physical activity, the possible reason may be that their health is very good, there is no need to participate in physical activity, and self evaluation of health is not good because of a sense of crisis and take more physical activity. But the three groups participated in the large and medium intensity exercise is basically the same, no significant difference. The specific circumstances in table 5.

Table 5 Self evaluation of health effects on MET

Factor	Samples	MVPA	Total
Bad	500	12.5(11.0)	20.9(14.9)*
Good	1325	14.1(14.5)	23.1(15.3)c
Very good	390	11.9(8.3)	15.3(9.2)c*

Note: c = p <.001* = p < 0.05

2.6 *Effects of sports facilities satisfaction for sports activities and medium intensity and total.*

At present, the study of sports venues facilities is still at the primary stage. Our understanding of this problem is still very limited. Analysis of variance showed that satisfaction for sports facilities does not affect the university administrative personnel to participate in sports activities, because of the

difference in each group no significant. Theoretically speaking, the more satisfied with the facilities, the enthusiasm to participate in the physical training should be higher, but the results of this study is different, the reason may be the sports facilities survey object even if not satisfied with their surrounding but their jobs make them take physical activity venue which is not restricted. In the research process, some sports venues were found to the small group of economic interests, and is open to teachers and students in time and space is very limited, this phenomenon is not the case, the research on this subject in the future should focus on the distribution in the sports facilities, in order to fully and reasonably use venues fitness function.

Table 6 Effect of sports facilities satisfaction of physical activity on MET

Factor	Samples	MVPA	Total
Not satisfied	265	13.5(12.6)	22.3 (12.6)
Satisfied	945	13.3(11.2)	21.7(13.7)
Very satisfied	1005	13.4(14.4)	20.6(15.9)

3 CONCLUSIONS AND RECOMMENDATIONS

3.1 *Conclusion*

The investigation results showed that ①43.8% of university administrator's body are a little weight. ②The 45 years old of the following administrative personnel to participate in the large and medium intensity physical activity and total physical activity were lower than those in the 46-55 age group, but higher than the age group over 56 years old. ③The exercise of administrator in colleges and universities experienced among physical activities are different significantly now. ④ The overweight group participating in physical activity is still higher than the weight of qualified group. ⑤The self health assessment of significant difference on the total sample size of sports activities. ⑥The situation of sports facilities in the satisfaction degree is not affecting college administrator to participate in sports activities, there is no significant difference.

3.2 *Suggestions*

Health of the overall level of administrative personnel in colleges and universities should be improved. Their health is likely to influence the teaching quality and management level which affects the development of university sports activities. The relevant departments for physical health level of the youth administrator should be given enough attention and provide solutions and the corresponding solution, due to the nature of this part of the group's work that determines their health and sports activities situation. In addition, the use of the distribution of sports facilities on the need to further increase the intensity of the research put forward the reasonable plan, to be fair use rationality and distribution. In general colleges and universities administrative personnel to participate in physical activity situation is not optimistic, their level of health is need to be concerned. Future research should specifically by experimental, so as to help them to improve their health, actively and regularly participate in physical activity, to lay the foundation to improve the health of higher education in China.

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