

Comparing Health Status and Lifestyle in Chinese College Students

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Abstract

The study aimed to compare health status and lifestyle in university students. The participants were college freshmen from physical education majors (N = 195, Mean = 20.9, SD = 1.87) and the school of Urban and Environmental majors (N = 195, Mean = 21.73, SD = 0.93) in Dalian, China. The Diagnostic Inventory of Health and Life habit (DIHAL.2) scale (Tokunaga, 2003) was administered to all participants. A one-way sample t-test was used to analyze the difference in both interdepartmental and gender effects. Results of t-test indicated that there were significantly difference in physical health, social health and life habit. Moreover, students majoring in physical education were scored lower on the mental health domain compared to the physical and social health domains. The practical implication of this study focused on finding the difference between the students who regularly exercised and those who did not, and considered the characteristics of gender. Finally, we hope that this study would be available for physical education in university.

Keywords

Health Status, Lifestyle, Physical Education, College Students

1. Introduction

Recently, while China's economy is growing at a dramatic rate, young people are having trouble getting a job. Therefore, it is recommended that university students should study regularly. They take quite a while to study major course and English test which are conditions for graduating from university and will help them gain an upper hand for commence employment. On the other hand, they have little time to exercise. Although students' awareness regarding the benefits to exercise increased, they reported poor health and not getting enough exercise. Recent research at a Chinese university showed that over 60% of university students though they did not exercise enough and nearly 20% of them were dissatisfied with their health (Wang & Sugiyama, 2014).

The WHO (2009) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. In China, there has recently been an increase focus on the health status of university students. Traditional Chinese health beliefs and the health education policy of the Chinese government have been reviewed. The current health status and lifestyle of university students in China was discussed, and the necessity for implementing physical education programs in universities to improve university students’ health and lifestyle was emphasized (Wang & Sugiyama, 2011). On the other hand, researchers in the field of sports psychology reached an agreement that engaging in sports could improve physical health (Ma, Yang, & Wang, 2009; Mao, 2009; Wang, 2009). However they paid little attention to social health and mental health, which also contributes to health status. In China, there is no scale that evaluates health status and lifestyle. However, in Japan, Tokunaga & Hashimoto (2001) developed an evaluation scale called Diagnostic Inventory of Health and Life Habit (DIHAL.2), which included the health level and life habit of individuals.

Physical education lesson was widely-regarded as a way to improve health and adjust smoothly to social situations (Wang, 2001). Previous studies show that university students who are physically active have better health status and lifestyle compared to those who are not active (Kiuchi, Arai, Urai, & Nakamura, 2009). If exercise becomes a habit, it may improve dietary habit, rest habit and health status (Tokunaga & Hashimoto, 2002).

We used DIHAL.2 in our study to compare the university students from physical education course to those from other majors. We hypothesize that students who are physically active will have a better health status and lifestyle than students who are physically inactive. We hope that our study results will contribute to the field of physical education.

2. Method

2.1. Participants and Procedure

One hundred ninety-five students (95 male and 100 female) from a physical education program (PE), and one hundred ninety-five students (81 male and 114 female) from the School of Urban and Environmental Science (UE) participated in the study. The study was approved by a university in Dalian, China. All of participants were college freshmen. They were given explanation for examination and each participant provided informed consent before the course began. Physical education is a required course in this university.

2.2. Measurements

We used Diagnostic Inventory of Health and Life habit (DIHAL.2) scale (Tokunaga, 2003). We translated it to a Chinese version. The technique of back-translation was employed. (Wang & Sugiyama, 2014) tested the validity and reliability of scale for Chinese students. We examined the validity of the factors for four indices. The root mean square error of approximating (RMSEA) had a minimum of 0.045, the GFI index had a fit of 0.935 and AGFI index was 0.901. Each index indicated a good fit. This scale has 47 items under four categories (health status, exercise habits, dietary habits and rest habits). Furthermore, health status is divided into three subcategories (physical health, mental health and social health) and scores range from 12 to 60 points. There are 8 items on exercise habits (scores range from 8 to 40), 13 items on dietary habits (scores range from 13 to 65 points), and 14 items on rest habits (scores range from 14 to 70). All items answered on a 5-point Likert-type scale.

2.3. Data Analysis

One-way sample t-test was used to compare difference in health status and lifestyle between male and female students with the same major. We tested the difference between two majors by one-way sample t-test. The data analysis was performed using SPSS Version 12.0 for Windows.

3. Results

3.1. The Comparison for Gender in the Same Major

A t-test was performed to assess the difference in health status and lifestyle for gender in the same major (Table 1). The results indicated that men with a PE major had significantly higher scores than women with a PE major on physical health, social health, exercise habit, Dietary habit and rest habit. On other hand, women were significantly lower than men were in mental health. When a UE major, women were significantly higher than men

Table 1. One-way sample *t*-test on health status and lifestyle in the same department.

	PE		<i>t</i>	CH		<i>t</i>
	M ± SD			M ± SD		
	male (95)	female (100)		male (81)	female (114)	
Physical Health ①	16.65 ± 2.78	15.27 ± 2.91	3.39**	14.47 ± 2.90	14.49 ± 2.54	0.06
Mental Health ②	8.32 ± 3.38	10.65 ± 3.61	4.65**	10.95 ± 3.09	13.20 ± 2.67	5.44**
Social Health ③	17.06 ± 2.71	15.90 ± 2.93	2.87**	14.62 ± 3.04	14.10 ± 2.56	1.30
Health Status ① - ③	42.03 ± 4.49	41.82 ± 5.31	3.30**	40.04 ± 4.60	41.79 ± 4.89	2.53*
Exercise Habit ④	34.29 ± 4.41	32.95 ± 4.34	2.15*	29.73 ± 4.85	28.13 ± 5.25	2.16*
Dietary Habit ⑤	52.26 ± 6.57	49.88 ± 8.67	2.16*	47.77 ± 6.32	49.07 ± 6.08	1.45
Rest Habit ⑥	55.64 ± 7.95	52.06 ± 8.29	3.08**	50.37 ± 6.89	49.54 ± 6.77	0.84
Life Habit ④ - ⑥	142.20 ± 17.68	134.89 ± 18.17	2.85**	127.86 ± 16.01	126.74 ± 15.67	0.49

* $P < 0.05$, ** $P < 0.01$.

were in mental health. Men were significantly higher than women in exercise habit. There were no significant differences in physical health, social health, dietary habit and rest habit for students in UE major.

3.2. The Comparison between PE Major and UE Major

Table 2 summarizes the difference between two majors. The results of a *t*-test showed that men with a PE major had significantly higher scores than UE major in physical and social health. However, men in a UE major were significantly higher than the men who come from PE major in mental health. Men in a PE major scored significantly higher than UE major in exercise habit, dietary habit and rest habit. When we compared data for women, we noted the results were same as men on health status and lifestyle but not for dietary habit, which had no significant difference.

4. Discussion

In this study, we aim to observe the difference in health status and lifestyle between a person who is physically active and physically inactive. Therefore, we chose subjects from a PE major who regularly exercise and a UE major who are usually sedentary. According to the results, it should be noted that women had significantly higher scores than men on mental health regardless of the major. It indicated that men got nervous easier, and women adapt successfully to group life. This is in agreement with [Li & Wang \(2007\)](#). However, in Japan, [Tokunaga & Hashimoto \(2001\)](#) performed research on health status and lifestyle. They reported that there was insignificant difference in gender. In PE major, men scored significantly better than women did in physical health status, social health and lifestyle. We found that men were likely to do sports than women; women were shorter on physical strength than men were, and men participate more eagerly in community activities and events than women did. In their personal life, men have better regular fitness habits, pay more attention to nutritional balance, and have much more sleeping time than women do. On the other hand, in EU majors, just mental health and exercise habit showed significant difference by gender. Results demonstrated that men had greater awareness regarding the benefits of exercise compared to women.

In the interdepartmental comparison, both men and women that were PE majors had better physical health, social health and life habit than UE majors. Thus, we propose a hypothesis that regular exercise habits are critically useful for health status. [Tokunaga & Hashimoto \(2002\)](#) reported that physical activity, eating habit, relaxation and sleeping were all related to health.

While we found an interesting result that UE majors were better than PE majors in both sexes on mental health. It was clear that the students in the UE major adjusted easier to being group. Our result was different from the research of [Sato, Saito, & Kamioka \(1996\)](#). The students with a PE major were also quickly to impatience. We cannot explain it clearly, thus it is an issue for future research in Chinese students.

Table 2. One-way sample *t*-test on health status and lifestyle according to department.

	Male		<i>t</i>	Female		<i>t</i>
	M ± SD			M ± SD		
	PE (95)	UE (81)		PE (100)	UE (114)	
Physical Health ①	16.65 ± 2.78	14.47 ± 2.90	5.09**	15.27 ± 2.91	14.49 ± 2.54	2.09*
Mental Health ②	8.32 ± 3.38	10.95 ± 3.09	5.36**	10.65 ± 3.61	13.20 ± 2.67	5.93**
Social Health ③	17.06 ± 2.71	14.62 ± 3.04	5.64**	15.90 ± 2.93	14.10 ± 2.56	4.81**
Health Status ① - ③	42.03 ± 4.49	40.04 ± 4.60	2.91**	41.82 ± 5.31	41.79 ± 4.89	0.04
Exercise Habit ④	34.29 ± 4.41	29.73 ± 4.85	6.54**	32.95 ± 4.34	28.13 ± 5.25	7.26**
Dietary Habit ⑤	52.26 ± 6.57	47.77 ± 6.32	4.61**	49.88 ± 8.67	49.07 ± 6.08	0.80
Rest Habit ⑥	55.64 ± 7.95	50.37 ± 6.89	4.67**	52.06 ± 8.29	49.54 ± 6.77	2.45*
Life Habit ④ - ⑥	142.20 ± 17.68	127.86 ± 16.01	5.60**	134.89 ± 18.17	126.74 ± 15.67	3.53**

P* < 0.05, *P* < 0.01.

5. Conclusion

In this study, we compared people who regularly exercised and those who did not. It is useful to provide information for developing PE program. Moreover, PE programs are a required subject for the first year freshman. Therefore, we can attempt to increase health status and improve life habit in PE lessons. We hope our research can contribute to the work of physical education in China. Finally, the limitations of the study—the present study showed the small sample size, therefore, we should do examination for additional sample in future.

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