

Weight Cognition and Weight Loss Behaviors of College Students

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Abstract. In recent years, college students began to set off an upsurge of losing weight, at the same time, "thin for beauty" of a single and deformed aesthetic concept began to invade colleges and universities. Even worse, this kind of assumption kidnaps the aesthetic assumption of college students, and has a growing trend. In order to understand the weight cognition, group characteristics and weight loss behavior of college students, especially normal students and students who are losing weight, this study adopts the questionnaire survey and interview method to investigate and analyze the weight status, cognition and behavior of college students and the factors that may affect what hold the view that. After research, the results symbolize that the Body Mass Index of college students is generally normal at present, but a considerable number of students have deviations in their weight and loses weight blindly. On the entire, there are quite a few factors affecting college students' weight cognition and this paper summarizes them into three aspects, identity background, the opinion climate and economy. Additionally there are also differences between College Students' weight perception and weight loss behavior they did.

Keywords: college students, weight cognition, Body Mass Index, weight loss, questionnaires

1. Introduction

Since ancient times, people have a specific definition of physical beauty, especially for women, from ancient China "imperial concubine" type of plump beauty, to now "thin for beauty", and people's aesthetic has undergone earth-shaking changes. The university stage is the stage in which ideas and behaviors are formed and developed stably and also the critical period in which diet and wholesome habits are formed. College students generally have a good knowledge of the receiving ability, but the survey finds that the overall cognitive health literacy of college students is relatively low, especially in weight cognition, many college students can't distinguish whether he really fat, think oneself fat college students than the students the actual BMI exceeds bid[1], more than 60% college students cannot rationally judge their own weight, in addition, 78% of participants lost weight for the purpose of being more beautiful rather than healthy [2-5]. As the main force in the future social development, the health status of college students is attracting mounting number of attention. How college students rationally understand their own weight and health status, rational diet and other wholesome behavior has become an urgent topic to discuss.

Although the material living conditions have been greatly improved, there are still many college students who choose unhealthy food to set aside money. Economic reasons limit students' food intake, and race, grade, social identity, free time and other factors also affect students' food choices [6], and time and disease also affect college students' food intake [5]. This study attempts to college students as the object, pay attention to body overweight and the health condition of college students, to investigate college students the need for the weight loss, weight analysis errors in the group characteristics of cognition of students including professional, grade and companion, economic status, gender, media contact, etc., as well as the food choices and other healthy behaviors of foods that have lost weight.

2. Materials and Methods

According to the research ideas mentioned above, this research is conducted from the following three aspects.

Firstly, the current status and cognition of BMI among college students. In order to make clear whether college students can correctly evaluate their weight status, whether or not be able to select rational science related behavior, this paper describes the distribution characteristics of BMI in college students' group, the satisfaction of their body weight, body size and the basic conditions of ideal BMI, understand the weight loss goals of college students who are asked to lose weight, as well as the reality of BMI for college students and its weight of the correlation between cognitive analysis.

Secondly, the group characteristics and influencing factors of students with weight cognitive bias. Firstly, we summarized and described the basic identity characteristics of those students with weight cognitive bias. Secondly, there are many factors influencing college students' weight cognition and behavior choice. Students' own personal background, consumption level and the concept of classmates around them may affect their own weight and body shape requirements. This study hypothesized that gender, region, consumption level and other factors have an impact on college students' weight cognition, and tried to make an objective analysis.

Thirdly, the specific analysis of college students' weight loss behavior. In order to provide effective intervention for college students' weight loss methods, this paper investigated college students' weight loss behaviors, including duration, approved weight loss methods, adopted weight loss methods, exercise enthusiasm, food preference, etc.

This study adopts questionnaire survey method as the main method and semi-structured interview method as the auxiliary method and the research object is undergraduate. Primarily, semi-structured interview is conducted on the students around, and variables affecting their weight cognition are preset. Furthermore the questionnaire mainly consists of four parts: basic information, physical condition, cognitive and behavioral part and relevant variables part.

The questionnaire was distributed and collected online by "questionnaire star". A total of 324 questionnaires was collected, among which 303 were valid and the effective rate was 93.5%. The sample included 93 boys and 210 girls. After the questionnaire was collected, the survey data were firstly sorted, screened and input, and then SPSS 22.0 was used for statistical analysis.

3. Results

According to the height and weight data, the BMI of each people was obtained by using the BMI calculation formula. As you can see from Table 1, the average BMI of 303 students was 20.41, with a median of 20.05, indicating that the BMI of college students was generally at a normal level. At the same time, according to BMI reference standards in China, we respectively statistics on the low side, the number of normal, overweight, three kinds of proportion in the overall sample, the result is shown in figure 1, 21.78% of the students is low, 69.31% of the students is normal, only 8.91% of the students are overweight, only from the point of BMI, the weight status of college students is positive.

In this questionnaire, we analyzed the cognition and attitude of college students through weight, body shape, "ideal weight" and other questions. In this questionnaire, we analyzed the cognition and attitude of college students through weight, body shape, "ideal weight" and other questions. The ideal body mass index of college students was calculated based on their reasonable weight and height. The following are the relevant statistics of body weight satisfaction, body shape satisfaction and ideal BMI. Among them, body weight satisfaction and body shape satisfaction are scored on a scale of 1 to 10, with 1 being the least satisfied and 10 being the most satisfied. As shown in Table 2, the mean values of body weight and body shape satisfaction were 6.63 and 6.41 respectively, and the overall satisfaction was slightly above the average level.

Table 1. Statistics of BMI

N	Valid	303
	Invalid	21
Average value		20.4108
Median		20.0474
Standard deviation		2.64522
Skewness		.933
Standard skewness error		.240
Kurtosis		1.405
Standard kurtosis error		.476
Minimum value		15.24
Maximum value		30.12

Table 2. Basic cognition of college students

		Body weight satisfaction	Body shape satisfaction	Ideal BMI
N	Valid	303	303	303
	Invalid	21	21	21
Average value		6.63	6.41	19.0420
Median		7.00	7.00	18.7500
Modal number		8	7	17.30
Standard deviation		2.607	2.491	2.26685

Table 3. Cross - tabulation of BMI levels and whether changes in body weight were required

		Whether changes in body weight were required				Total
		Need to lose weight	Need to put on weight	Don't have to change	Don't know	
BMI levels	Low	15	21	24	6	66
	Normal	126	27	51	6	210
	Over	27	0	0	0	27
Total		56	16	25	4	303

As can be seen from Table 3, 22.73%, 60% and 100% of low weight, normal weight and overweight students require to lose weight, respectively. It is shocking and thought-provoking to have such a high proportion of normal or even underweight students asking to lose weight. Why lose weight when your BMI says you don't need to?

Table 4 shows the percentage of reasons why college students change their weight. In the questionnaire, we ask students their primary purpose of changing weight. The results showed that more than half of the students changed their weight for the sake of physical beauty, followed by physical health, and a small number of students asked to change their weight for other people's influence or other reasons. The concept that beauty is more important than health still affects most college students, but the students who choose health as the primary purpose account for 37.6%, which indicates that with more and more health knowledge popular science education, "health beauty" will become the general trend.

Table 4. Objective statistics of weight change

		Frequency	Percentage	Cumulative percentage
Valid	Physical beauty	114	37.6	37.6
	Physical health	153	50.5	88.1
	Other people's influence	12	4.0	92.1
	Other reasons	24	7.9	100.0
	Total	303	100.0	

A total of 141 students with normal or low BMI who thought they needed to lose weight was selected from the sample, accounting for 46.5% of the total number. We defined them as "cognitive deviation group". Because there were no overweight BMI students in the original sample who thought they did not need to change their weight or even gain weight, and we focused more on the former in this study. Therefore, we can define the remaining students as "cognitive rational group" and compare their group characteristics, the specific results are shown in Table 5.

Table 5. Summary table of group characteristics of "cognitive deviation group" and "cognitive rational group"

		Cognition		Total
		Cognitive rational group	Cognitive deviation group	
Grade	Freshman	33	21	54
	Sophomore	48	81	129
	Junior	57	30	87
	Senior	24	9	33
Gender	Man	66	27	93
	Woman	96	114	210
Territory	East	117	66	183
	Midland	27	48	75
	West	18	27	45
Only child	Yes	99	78	177
	No	63	63	126
Meal card consumption amount	<400	24	27	51
	400~800	54	69	123
	800~1200	63	30	93
	>1200	21	15	36
Snack consumption amount	<200	60	42	102
	200~400	42	60	102
	400~600	21	27	48
	>600	39	12	51
Total consumption amount	<700	18	9	27
	700~1200	30	30	60
	1200~1700	39	36	75
	1700~2200	39	39	78
	>2200	36	27	63
Talk about weight	Often	33	69	102
	once in a while	84	42	126
	seldom	45	30	75

From the perspective of grade, the percentage of students with cognitive deviation in the sophomore year was 62.79%, significantly higher than that in other grades according to the data in Table 5. This may be because freshmen are just entering the new environment of college and have no time to think about their weight. Sophomore students, however, have become familiar with and easily mastered the rules of college life, instead paying more attention to their appearance and putting more energy into social communication. The cognition to weight of the undergraduate of senior grade may mature gradually, also facing the many sided pressure such as graduation, obtain employment, take an examination of grind, reduce the requirement to reducing weight somewhat thereby.

From the perspective of gender, the average weight satisfaction of boys and girls is 7.16 and 6.40, respectively, and boys are slightly higher than girls. In table 6, the percentage of women with cognitive biases is as high as 54.3 % significantly higher than the 29.0 % of men, which is also consistent with our daily experience. The society still has an unreasonable tendency to judge the value of women, and the external image of girls is more demanding. The aesthetic concept of thinness as beauty has gradually evolved into aesthetic violence and often abducts girls. It can also be found from Table 6 that 29% of male students want to gain weight, while only 10% of female students do.

Table 6. Cross - tabulation of self-requirement in the change of weight and gender

		Gender		Total
		Man	Woman	
Self-requirement in the change of weight	Need to lose weight	42	126	168
	Need to put on weight	27	21	48
	Don't have to change	24	51	75
	Don't know	0	12	12
Total		31	93	210

The formation of social aesthetics is affected by many factors, of which economic factors are the most fundamental and important. This paper discusses the relationship between economic factors and weight satisfaction of college students from two aspects of region and consumption level.

It can also be seen from Table 7 that the proportion of students with cognitive deviation in their hometown in the western region is the highest, followed by the central region and the eastern region.

Table 7. Average weight satisfaction of students in the east, the midland and the west

Territory	Average value	Number of people	Standard deviation
East	7.46	183	2.218
Midland	5.76	75	2.570
West	4.73	45	2.815
Total	6.63	303	2.607

In terms of consumption level, there is a significant difference between body weight satisfaction and meal card consumption amount, and the two are positively correlated, according to the data in Table 8 and Table 9. Students who spent less than 400 yuan on meals were significantly less satisfied with their weight than those who spent more than 1,200 yuan on meals. Students who spent more than 600 yuan on snacks per month were significantly more satisfied with their weight than those who spent less than 600 yuan.

Table 8. Average weight satisfaction of students with different meal card consumption amount

Meal card consumption amount	Average value	Number of people	Standard deviation
<400	4.41	51	2.785
400~800	6.85	123	2.341
800~1200	6.81	93	2.442
>1200	8.58	36	1.505
Total	6.63	303	2.607

Table 9. Average weight satisfaction of students with different snack consumption amount

Snack consumption amount	Average value	Number of people	Standard deviation
<200	6.21	102	3.003
200~400	6.32	102	2.253
400~600	6.50	48	2.805
>600	8.25	51	1.485
Total	6.69	303	2.608

In general, college students' weight satisfaction seems to be in direct proportion to their economic level. First, the low-income group does not have the financial strength to make the same "healthy consumption" as the high-income group. Second, they may not be as confident about their body shape and other aspects as the high-income group.

As can be seen from Table 10, there is a significant difference in the frequency of talking about weight in terms of weight satisfaction. The average weight satisfaction of the students who often talked about weight with others was only 5.44, and there was no significant difference between the students who talked occasionally and those who did not talk at all. Often talking about weight with others will increase their attention to weight and create an opinion climate focusing on weight and body shape, so that students are more likely to want to "optimize" their body weight and have a lot of dissatisfaction with their existing body weight.

Table 10. A Statistical Table Showing the Frequency Of Weight Talk And The Mean Of Weight Satisfaction

Talk about weight	Average value	Number of people	Standard deviation
Often	5.44	102	2.977
once in a while	7.21	126	2.125
seldom	7.28	75	2.319
Total	6.63	303	2.607

In order to evaluate the weight loss status of college students, it is necessary to understand the specific behaviors of weight loss. First of all, descriptive statistics were made on the ways and persistence of losing weight adopted by college students. Then, specific investigations were carried out on sports and diet.

The main ways for college students to lose weight are exercise, diet adjustment, medicine and surgery. The highest number of people agreed with "exercise", followed by "diet adjustment", and drugs and surgery were also recognized by some students. In the order of actual actions taken, the score of "diet adjustment" exceeded that of "exercise", as shown in Table 11. The reason may be that it takes more time and energy to exercise than to adjust your diet.

Table 11. Statistics of different ways of losing weight

		Authorized number	The number of people who have done it
ways	Exercise	130	98
	Diet adjustment	121	117
	Taking medicine	32	26
	Surgery	25	3
	Others	5	2

In terms of the duration of weight loss, many students reported that they had "acted but now stopped or intermittently", and the fewest students chose to "act and persist until now", as shown in Table 12. Although many students have a strong desire to lose weight, it is difficult to stick to it in action.

Table 12. Statistics of weight loss duration

		Frequency	Percentage	Cumulative percentage
Duration of weight loss	Get off the ground	51	16.8	16.8
	Acted and held on to the present	36	11.9	28.7
	Acted but now stopped or intermittently	93	30.7	59.4
	Think but do not act	75	24.8	84.2
	No such idea	48	15.8	100
Total		303	100	

In terms of exercise frequency, 38% of the students exercised once or twice a week, only 6.9% of the students could exercise every day, and 9.9% of the students exercised once a month or less, as shown in Table 13. It can be seen that contemporary college students are relatively short of sports.

Table 13. Statistics of exercise frequency

		Frequency	Percentage	Cumulative percentage
Exercise frequency	Less than once a month	30	9.9	9.9
	2 to 3 times per month	57	18.8	28.7
	Once or twice a week	114	37.6	66.3
	Three to five times a week	81	26.7	93.1
	One or more times a day	21	6.9	100
Total		303	100	

In terms of preferred food types, meat scored highest, followed by vegetables, as shown in Table 14. However, from the results, it seems that college students' diet structure is not very reasonable, their intake of vegetables and fruits food proportion is too low, the proportion of meat intake is too high.

Table 14. Statistics of different types of food

		The number of people who prefer this type of food	Percentage	Daily intake(g)
Types of food	Meat	141	46.5	115
	Vegetables	133	43.9	323
	Dairy products and soy products	110	36.2	238
	Fruits	105	34.5	118
	Pastries	99	32.8	52
	Nuts	61	20.1	11
	Others	2	0.7	24

4. Discussion and Recommendations

From the perspective of BMI, the current health status of college students is generally optimistic, but many college students have cognitive deviation in weight. Although their BMI is normal, they are not satisfied with their weight for the purpose of pursuing beauty and so on, and they require to lose weight. The factors influencing college students' weight cognition are complex. This study mainly investigated the identity background, opinion climate and economy. It was found that weight satisfaction of college students was correlated with gender, grade, frequency of talking about weight, and monthly average consumption amount of meals and snacks. The body weight satisfaction of female and sophomore students is relatively low, and the body weight satisfaction is negatively correlated with the frequency of talking about body weight, and positively correlated with the monthly average consumption amount of meals and snacks. In terms of behavior, college students lose weight for a relatively short period of time, lack of exercise and prefer meat in diet.

How to guide college students to know their weight and body shape scientifically and rationally, and take appropriate actions accordingly?

First of all, from the social and cultural construction, people should be encouraged to form a diversified aesthetic, cannot let the abnormal aesthetic poisoning of the young generation of college students. This requires the joint efforts of cultural departments and media industries to form a correct public opinion guidance, resist the erosion of traditional patriarchal ideology, regulate commercial advertising and other commercial behaviors, and put an end to turning women's beauty into a means for businesses to make profits.

Secondly, medical, psychological aspects should do more popular science, especially to rely on the school platform and media platform, play the educational function of the school, with college students welcome the way, guide college students to establish a correct concept of weight, let college students know that too fat or too thin is not good. Most students know about the dangers of being overweight, but very little about the dangers of being underweight. At present, most of the physical education in schools pays more attention to skill training and coping with the standard test, but lack of theoretical guidance and training.

Last but not the least, pay attention to the knowledge gap and health status of low-income groups, and give them more preference in guidance and care. Everyone should consciously cultivate a diverse perspective, not limited to the appreciation of a single beauty, but should consider their own all-round development, establish a person's value is not only reflected by the appearance of values.

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