

Study on the Influencing Factors and Countermeasures of Female College Students' Obesity

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Abstract

Obesity is a major public health problem in the 21st century. In recent years, the incidence of obesity among female college students has increased significantly. As a special group, the health status of female college students plays an important role in national development and construction. This article through investigating the influence factors of zhaoqing university common obesity in female college students, found that the main factors influencing the female college students obesity were genetic factors, diet, life style, health consciousness and physical exercise, thus a reasonable diet, science, sports and countermeasures such as psychological counseling aimed at improving the consciousness of female college students' healthy life and develop good lifestyle, guidelines for obesity prevention and treatment of female college students.

Keywords

Female College Students; Physical Health; Obesity; Countermeasure.

1. Introduction

Obesity is a complex metabolic disorder syndrome, which can lead to chronic diseases such as hypertension, hyperlipidemia, diabetes, respiratory diseases and cardiovascular and cerebrovascular diseases. With the modernization of lifestyle, the frequency of physical activity is gradually decreasing and the dietary habits are gradually changing. In both developed and developing countries, the prevalence of obesity-related diseases has risen sharply, which is roughly positively correlated with economic development [1]. In recent years, China's obesity population has soared, and the obesity population is gradually showing a trend of younger age. College students, due to a variety of reasons, the incidence rate of obesity increased significantly faster, the degree of obesity is increasingly serious [2]. Obesity standards of Chinese adult: body mass index greater than or equal to 24 is overweight, greater than or equal to 28 is obese [3].

In 2014, the body test data of college students showed that the incidence of obesity among female students was 10.4% [4]. Obesity will bring the burden of life and study to female college students, resulting in the decline of cardiopulmonary function, metabolic level and other adverse physical reactions, and will make female college students not confident psychological, affect the interpersonal skills and social adaptability, is very detrimental to the healthy development of physical and mental health of college students. Due to the difference of male and female in physiological structure and behavior, the causes and countermeasures of obesity are different. This study aims at the current situation of female college students' obesity, through investigating the related factors of female college students' obesity, analyzes and solves the problem of female college students' obesity, and provides scientific and reasonable guidance and suggestions for female college students.

2. Subjects and Methods

2.1. Subjects

256 female college students in Zhaoqing University were randomly selected to calculate their body mass index (BMI) based on their height and weight, $BMI = \text{weight (kg)} / \text{height (m)}^2$. According to BMI evaluation criteria, $BMI \geq 28 \text{ kg/m}^2$ was determined as obesity.

2.2. Methods

2.2.1. Literature Method

According to the purpose and content of the study, relevant books were consulted in the library of Zhaoqing University, and relevant materials were collected and read through CNKI, Wikipedia.com, Wanfang database and foreign language search, which provided a theoretical basis for the smooth conduct of this study.

2.2.2. Questionnaire Survey

For a comprehensive understanding of the main factors that cause obesity of ordinary female university students, may be the causes of obesity and combined with the actual situation of college students designed questionnaire, the questionnaire was distributed to participate in the evaluation of college students, and a questionnaire to fill in time, out 300 questionnaires, recycling questionnaire 280, recovery rate is 93.33%, the effective questionnaire 256, questionnaire effective rate was 85.33%.

2.2.3. Interviews

College students participating in the survey were randomly selected to understand the related factors affecting the obesity of female college students and how to improve obesity through communication and conversation, which provided some reference for the design of the questionnaire and the proposal of suggestions.

2.2.4. Data Statistics

The Excel software was used to classify and sort the data collected from the questionnaire, and the data statistics and analysis were carried out to compare the differences in the behavior habits of normal and obese female college students and draw the corresponding conclusions.

3. Results

3.1. Current Situation of Obesity Degree of Female College Students

Table 1. Current situation of obesity degree of female college students (using the criteria of BMI value)

	obesity	Slightly obese	Standard weight	underweight
The number of	35	63	134	33
The total %	13.67	24.61	52.34	12.89

Table 1 shows that among the 256 female college students, 52.34% of them have normal weight, 12.89% of them are underweight, 24% of them are mildly obese, and it is worth noting that 13.67% of them are obese.

3.2. Analysis of Influencing Factors of Female College Students' Obesity

3.2.1. Genetic Factors

Table 2. Genetic statistics of female college students' obesity

Genetic factors,		The number of	obesity	The total %	It accounts for % of total obesity
Obesity of Parents	One fat	87	8	9.20	22.86
	Both sides are fat	32	25	78.12	71.43
	Not all fat	137	2	1.46	5.71

As can be seen from Table 2, among the 256 female college students randomly selected, the number of female college students with obesity caused by the obesity of both parents is higher, accounting for 71.43% of the total amount of obesity. Genetic factors play an important role in obesity, most of which are caused by the obesity of both parents.

3.2.2. Dietary Habits

Table 3 shows that most obese people have unhealthy diets. Only 14.29% of obese female college students have meals on time, but female college students have breakfast better. Most female college students do not have the habit of having extra meals and snacks. However, only 5.71% of the obese people do not have the habit of extra meals and 2.86% of the obese people do not have the habit of extra meals and snacks. Extra meals and snacks are more common in the obese people. The diet of obese people is more inclined to barbecue and sweet food, accounting for 71.43% and 28.57% of the total number of obese people respectively. In the choice of drinking water, they are more inclined to carbonic acid, fruit juice, tea drinks and milk. Only 2.86% of obese female college students quench their thirst with drinking water.

Unhealthy eating and drinking habits are the inducing factors of obesity in female college students. The diet with high oil, fat and sugar makes the students' calories exceed the limit, and excessive energy cannot be consumed in the body, which eventually forms the accumulation of fat in the body and leads to the excessive BMI [5].

Table 4 shows that more than 80% of obese female college students have a bad life schedule. In terms of sleep, it is common for female college students to stay up late. More than 90% of obese female college students have different degrees of staying up late, and the proportion of obese female college students with poor sleep quality is less than that of obese female college students with good sleep quality.

Bad life and rest will lead to endocrine and metabolism disorders and aggravate the obesity of college students. This study shows that the sleep quality of female college students with normal weight is obviously due to obese female college students. The reason is that staying up late and poor sleep quality will inhibit the production of hormones in the cerebral cortex, cause the increase of appetite, increase the frequency of eating, and easily lead to obesity and overweight [6].

Table 3. Statistics of female college students' eating habits

Eating habits		The number of	obesity	The total %	It accounts for % of total obesity
Eating habits	A meal on time	187	5	2.67	14.29
	Not hungry do not eat	23	13	56.52	37.14
	Apparent idle time	46	17	36.96	48.57
Breakfast is	never	26	3	11.54	8.57
	Once in a while	44	6	13.04	17.14
	often	68	11	16.18	31.43
	always	118	15	12.71	42.86
Situation that adds	never	132	2	1.52	5.71
	Once in a while	77	9	11.69	25.71
	often	32	11	34.38	31.43
	always	15	13	86.67	37.14
Midnight snack is	never	118	1	0.85	2.86
	Once in a while	80	7	8.75	20
	often	36	13	36.11	37.14
	always	22	14	63.64	40
Eating preferences	Fried class	36	6	16.67	17.14
	Saute class	75	7	9.33	20
	Cooking class	43	0	0	0
	Frozen Desserts	54	10	18.52	28.57
	roast	48	12	25	71.43
Selection of drinking water	Pure water	93	1	1.08	2.86
	Carbonated drinks	22	8	36.36	22.86
	Fruit juice	35	10	28.57	28.57
	Tea beverages	48	5	10.42	14.29
	dairy	58	6	10.34	17.14

3.2.3. Life Style

Table 4. Investigation of female college students' life and rest

Life work and rest		The number of	obesity	The total %	It accounts for % of total obesity
Stay up late is	never	21	3	14.29	8.57
	Once in a while	45	5	11.11	14.29
	often	166	18	10.84	51.43
	always	24	9	37.5	24.71
sleep	Falling asleep is better for quality sleep	156	19	12.18	54.29
	Fall asleep quickly but wake up easily from many dreams	48	9	18.75	24.71
	Not easy to fall asleep	42	7	16.67	20

3.2.4. Health Awareness

Table 5. Statistics of female college students' health awareness

Health consciousness		The number of	obesity	The total %	It accounts for % of total obesity
Attitudes towards weight	Never care about	20	5	25	14.29
	You can lose weight for beauty	127	3	2.36	8.57
	Sacrifice your health for your figure	18	1	5.56	2.86
	No time for weight and weight loss	47	9	19.15	24.71
	Losing weight is too hard to try	44	17	38.64	48.57
Anxiety situation	never	176	5	9.09	14.29
	Once in a while	65	13	20	37.14
	often	10	16	50	45.71
	always	5	1	20	2.86
Psychological change of obesity	Lack of self-confidence, autism	92	17	18.48	48.57
	Paranoia, high mood swings	87	8	9.20	22.86
	Discrimination, inferiority complex	69	8	11.59	22.86
	No effect or little effect	8	2	25	5.71

As shown in Table 5, obesity is closely related to female college students' awareness of health. Most of ordinary female college students pay more attention to the change of weight, while obese female college students pay less attention to the change of weight, and about 50% of obese students think it is too hard to lose weight and are not willing to try. Obesity will have a negative impact on the psychology of female college students, causing anxiety, so that they lack confidence, autism, greater mood swings, feel discriminated and inferiority, the number of such negative emotions accounted for more than 90% of the number of obese.

Healthy consciousness and behavior are the key to promote female college students to control their body shape. In addition, obesity will cause the change of college students' psychological state, leading to more negative emotions [7]. Bad psychological mood is the main reason for the body to produce mental stress, causing vegetative nerve dysfunction, cannot be a good control of the amount of food will become the inducing factor of obesity.

3.2.5. Physical Exercise

Table 6. Physical exercise of female college students

Physical exercise		The number of	obesity	The total %	It accounts for % of total obesity
Exercise frequency	never	58	14	24.14	40
	Once in a while	145	17	11.72	48.57
	often	37	3	8.11	8.57
	always	16	1	6.25	2.86
Movement way	Anaerobic exercise	48	2	4.17	9.52
	Cardio is the main exercise	76	5	6.58	23.81
	Mixed movement	132	14	10.61	66.67

The results in Table 6 show that most female college students have the habit of doing physical exercise and have a sense of health and exercise. Among them, the number of times of exercise of obese female college students is limited, and the choice of exercise mode is mostly mixed exercise, accounting for 66.67% of the total number of obese people, indicating that most of the obese people do not like a single exercise mode.

Physical exercise can regulate the endocrine system, improve the activity of fat metabolism enzymes, reduce the percentage of body fat, promote the decomposition of triglycerides, fat oxidation and participate in the body energy supply. Studies have shown that [8], both low and medium intensity aerobic exercise and high intensity intermittent exercise can use fat oxidation metabolism for energy supply, to achieve the effect of reducing body fat percentage and obesity.

4. Conclusions and Suggestions

4.1. Conclusion

The survey results show that among the 256 female college students randomly selected, 52.34% have normal weight and 12.89% are underweight, while 24.61% and 13.67% are slightly obese and obese female college students respectively, indicating that obesity is more serious. The reasons for female college students' obesity include irregular diet, high calorie food with high sugar, high fat and high salt, bad life style such as staying up late, excessive mental pressure and lack of physical exercise. In the choice of ways to lose weight, most people choose exercise to lose weight, while the obese people are more likely to choose other means without exercise. In addition, college students' bad eating habits, irregular life and rest, lack of exercise and other factors are more likely to lead to obesity.

4.2. Suggestions

4.2.1. Reasonable Diet

The occurrence of obesity is closely related to eating habits. To develop good eating habits and rationally match dietary nutrition is an effective support for weight loss and one of the ways to reduce fat. Food collocation should be selected according to different time periods. For example, breakfast should be digestible, such as milk, eggs, etc., for lunch, vegetables and other foods with high fiber content and meat with low oil should be consumed, and dinner should be light and staple food should be properly consumed. In addition, eating habits such as drinking soup

before meals and eating slowly can increase satiety, reduce intake and promote food absorption in the intestines at the same time [9].

4.2.2. Scientific Exercise to Lose Weight

Exercise is the healthiest way to lose weight, female college students can according to their own actual situation, interests and hobbies to choose the appropriate way of exercise, more popular sports by female college students are jogging, swimming, aerobics, etc., no matter which way of exercise choice should control the exercise intensity and load. Studies have shown that [10] Although the exercise time and load of moderate intensity continuous exercise and high intensity intermittent exercise are different, they can reduce the body fat content of obese female college students, achieve the purpose of reducing fat and improving the health level of female college students.

4.2.3. Strengthen Psychological Quality Education

Facing the current situation of college students' obesity, it is very necessary to take some psychological intervention. The psychological intervention for obese female college students should be more targeted, to reduce their mental pressure, to participate in the weight loss campaign through confidence. For some female college students who are obese due to endocrine disorders caused by excessive academic pressure, psychological counseling can relieve their emotions, reduce their psychological pressure, restore the balance of endocrine metabolism and reduce the rate of fat synthesis.

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