

What Do They Eat? A Survey of Eat-Out Habit of University Students in Taiwan

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Abstract

Main purpose of this research is trying to understand food likeliness of Taiwan college students, and probe whether these food are healthy. Three survey steps are taken as: step 1, market survey for what kind of foods are selling around the campuses; step 2, questionnaire investigation for students food preference; step 3, analyzing whether these favorite foods are healthy or not. The result shows: major consideration for students food selection are “taste” and “price”; 63% of students are taking food or snacks late at night at least once a week. Top three most favorite foods are: Taiwanese fries (yan su ji), carbon grilled chicken and fried fish steaks. Quantities of these foods are small, prices are low, and easy access from roadside food stands. Problems of them are high calories, easy to accumulate free radical in human body, plus insanitary food processing environment. They are harmful to student health. We suggest Taiwan government take it seriously.

Keywords: *College student, diet healthiness, food safety, food nutrition.*

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1. Introduction

Convenient and fast are two major incentives for people to bring to-go food to work place or school (Lee, 2013); Yet, unhealthy eating behavior and custom will make serious adverse result for people's health. Recent researches indicated that the trend of people getting cardiovascular and chronic diseases are getting younger (Chen and Yan, 2015), cardiovascular disease is no more a problem of senior people (Liu and Yang, 2010). In the long run, it is easy to cause problems of uneven nutritious taking and higher risks in getting obese and high blood pressure, blood fat and blood sugar (Luo et al., 2012). Hence, modern consumers are thinking highly on food safety and nutrition.

In addition to traditional cafeteria, lots of snacks, fried, iced and other instant foods are emerging in college campuses. Although they provide variable selections and solve students' diet needs, they are temptation for unbalanced diet. Meanwhile, lots of businessman are aiming college students and setting up food processing and stands within 100 campus meters (Zhou, 2010). These snacks are seducing students, making them sick if ate unhygienic food. Research reveals that most students are unaware importance of diet (Su and Fan, 2016). Eat casually, like to buy from food stands, and drive by convenience (Shen et al., 2015). More than 70% of college students taking custom or taste as their choice (Li, 2018). Therefore, healthy diet should be an important issue. Understanding their eating preference and custom are important to their eating activities and health.

Up to this date, there are limited papers on the health issue around Taiwan college campuses food stands and shops, and their relations with college students diet habit and health. Most papers are focusing on students self-conscience health, health idea, and diet activities (Chen and Yen, 2015); college students food knowledge and diet activities (Luo et al., 2018); or educate college students hygiene knowledge and skills (Chih et al., 2016). Little researches are on their diet habit and foods around them. Consequently, purpose of this research is investigating Taiwan college students diet preferences and habits, then analyzing their consumption patterns and healthiness.

2. Theoretical Analysis

Research shows, nutritious knowledge has positive correlation with diet activity. Nutritious knowledge influences diet activity. Diet activity has profound influences on health. Unhealthful diet activities will increase probabilities for getting chronic diseases and obsesses (Chen et al., 2016). Unfortunately, most college students are not pay attention to

health issue (Luo et al., 2017), Li (2013) indicates: college students often taking fried food and late night snacks while watching TV or reading books. They are not eating in a regular manner, unbalanced nutritious taking, loving high calorie food, and high ratios of eating late night snacks (Hang et al., 2009), taking irregular diet habit and lack of nutritious knowledge (Wang; Su and Fan, 2016). Research indicates, nowadays college students are not having enough nutritious conscientious, not attach importance to health, have lots of opportunities for eating outside, and poor quality of diet and nutrition (Chen and Yen, 2015). A great portion of students have unreasonable protein taking, deficient nutrition knowledge, not eating breakfast, and irregular diet habits. Hence, there is a need to increase college students nutrition knowledge, make them take a reasonable and balance diet (Liu et al., 2013). We have to strengthen college student education and promote healthful diet(Li, 2018 ; Wang, 2016).

Health consciousness is raising, healthy diet has being valued highly, People are paying more attention on low fat, low sodium and low cholesterol foods, and eating seasonal food with its original flavor and nutrition(Yang et al., 2015). “Diet education” is an education of diet activities (Yan et al., 2015). Diet activities are activities of taking food nutrition. It is a part of life style, not only teaching nutritious knowledge and wishing to change nutrition and health attitude, but other factors need to be considered (Fu and Jien, 2009). A lot of experts agreed that diet education is helpful for Taiwanese’s nutrition knowledge, diet habit, sense of food safety and social development (Yan and Zeng, 2014).They suggested that college education should include correct nutritious knowledge, and thus improve students’ diet activities for better health conditions (Chen et al., 2016).

3. Research Methods and Process

3.1. Data Collection

Target of this research is based on college students in Tainan, Taiwan,201. A college was chosen by random. Questionnaires were distributed by the researcher between April 8-22, 2017. Total number of questionnaires distributed were 172, number of valid collected were 98, collected ratio 56.9%. The distribution of the people that participated in the final sample were: 40 males, 58 females;74 people, were staying in dormitory.

3.2. Research Tool

Information collection of this research was done through questionnaire survey. The questionnaire was “Diet habit in campus survey”. Based on the research purpose, the author



observed kinds of food served around Tainan city campuses, interviewed related persons around campuses (such as students, teachers, administrative staff, and visitors), reviewed related webpages and documents, then developed the questionnaire. Contents of the questionnaire includes: basic information, diet habit, and most favorite foods. Basic information and diet habit are single choice, most favorite foods are multiple choices.

3.3. Data Analysis

Collected information was analyzed through SPSS (22.0version), descriptive statistics includes: ratio, average, and standard deviation.

4. Result and Discussion

4.1. Diet Habit of College Students

Sample information shows, college students' acceptable expenses within the campus for a meal is NTD73.83. Diet with other/s is the highest ratio (45 person, 45.9%), then occasional with other/s (39 person, 39.8%), the least is eating alone (14 person, 14.3%). Considerations of their choices are: highest ratio for "taste" and "price", 38 persons (38.8%) and 25 persons (25.5%) respectively; then "habit" and "convenience", 14% (14.3persons) and 13%(13.3persons) respectively; the least are "hygiene" and "service", only 8 persons (5.2%) chose hygiene, and no one chose service. Frequencies of buying late night snacks are: most of them buying 1-2 times (62 persons, 63.3%) a week, 24 persons (24.5%) 3-4 times, as shown in Table 1. Overall statistics shows: diet habit for most students is going with other/s, taste and price are key factors that affect their diet choices. This indicates that most of them are eating around the campus; taste, price and convenience are their major considerations; and hygiene is not important for them. Most students ate late night snacks 1-2 times a week. Such diet habit is a worrying scenario.

Table 1. Students diet habit and consideration factor (n=98)

Variable		n	Ratio
Diet within the campus	Alone	14	14.3
	Go with other/s	45	45.9
	Uncertain	39	39.8
Major diet consideration	Habit	14	14.3
	Taste	38	38.8
	Convenience	13	13.3
	Price	25	25.5
	Hygiene	8	8.2
	Service	0	0.0

4.2. Most Favorite Foods of College Students

In order to probe students' favorite foods, this research sorted out 68 kinds of foods for students multiple choices. The result shows, top ten students favorite foods in order are: small steamed bun (soup dumpling), Taiwan fries (yan shu ji), sushi, omelet rice (dan bao fan), light fried chicken cutlet, deep fried chicken cutlet, steak, smelly tofu, grilled chicken, and spaghetti (Table 2). It shows, features of students' favorite foods are snacks, fried, and flour related high calorific foods.

Table 2. Ranks of favorite foods of college students

Food	n	%	ran
Small steamed bun	64	66	1
Taiwan fries	61	62.9	2
Sushi	59	60.8	3
Omelet rice	58	59.8	4
Light fried chicken cutlet	58	59.8	4
Deep fried chicken cutlet	56	57.7	6
Steak	53	54.6	7
Smelly tofu	46	47.4	8
Grilled chicken	51	52.6	9
Spaghetti	51	52.6	9

Further analysis of food ingredients and nutrition shows in Table 3 and Table 4. This table indicates: top ten college students favorite foods are available from food stands around campuses. These foods are processed and sold by roadsides. Their hygiene environment are not good, cooking facilities are simple, and food qualities are not secured (Zhou, 2010). Meanwhile, these foods ingredients are high fat, high calorie, and less cellulose. Except sushi, fats of all these foods are exceeding 30% of “daily diet suggestions” published by National Health Bureau of Ministry of Health and Welfare, R.O.C.(Taiwan) (Health Promotion Administration ,Ministry of Health and Welfare, 2018). Most students are not reaching suggested ratio of the three nutrition taking: protein 10-20%, lipid 20-30%, carbohydrate 50-60%. Also, main ingredients of Table 4 are lacking vegetables. Only 27 students (27.6%) in this research chose vegetable salads. This reveals that most college students’ diet are imbalanced, short of vegetables, and less cellulose taking. They are harmful to health.

Table 3. Favorite foods ingredients of college students

Type of food	Main ingredients	Weight/per serve
Small steamed bun	Flour, minced pork, scallion	105g
Taiwan fries	Chicken breast, flour, fried oil	200g
Sushi	Rice, vinegar, sugar	125g
Omelet rice	Egg, rice	400g
Light fried chicken cutlet	Chicken, fried oil	200g
Deep fried chicken cutlet	Chicken breast, fried oil	200g
Steak	Beef and noodles	170g add 124 g
Smelly tofu	Tofu, fried oil	150g
Grilled chicken	Chicken, sauce	85g
spaghetti	Sauce, spaghetti	248g

Table 4. Favorite foods nutrition analysis of college students

Type of food	fat	carbonhydrate	protein	cellulose	calorie
Small steamed bun	43%	37%	20%	3.7g	250
Taiwan fries	65%	10%	25%	0.6g	610
Sushi	3%	85%	12%	1.1g	189
Omelet rice	35%	49%	16%	2.8g	380
Light fried chicken cutlet	67%	9%	23%	0.6g	541
Deep fried chicken cutlet	44%	29%	27%	1.2g	470
Steak(beef)	55%	0%	45%	0g	214
(noodle)	18%	23%	10%	5.2g	170
Smelly tofu	52%	10%	38%	1.8g	189
Grilled chicken	53%	0%	47%	0g	201
Spaghetti	33%	47%	20%	5.2g	350

5. Conclusion

Results of this research are: students' acceptable average dining expenses is NTD 73.83 per person per meal; highest dining habit is going with other/s, least ratio is dining alone; most of them are eating at cafeteria; major choice considerations are taste and price. 63% of students take late night snacks at least once a week. Notably, their diet requirements are merely convenience, likeness, cheap; and not care about hygiene and service. This research also found that top ten favorite foods for college students are available around campuses. These foods are cooked and sold by the roadsides.

Food safety is a potential concern. College students like to eat Taiwan fries, light fried chicken, deep fried chicken, steak, smelly tofu, grilled chicken and spaghetti. These are high fat, high calorie foods, which are having adverse impact toward students' health. In spite of these facts, this research discovered that these favorite foods are not complying with daily diet norms. The three nutrition taking ratio for college students are following far behind "daily diet suggestion" (protein 10-20%, lipid 20-30%, carbohydrate 50-60%), and short of vegetables and cellulose taking. Researches indicated repeatedly that, never ignore taking enough vegetables and fruits; it keeps healthy (Health Promotion Administration, Ministry of Health and Welfare, 2018); Nutrition and hygiene are key factors for college students health. Unfortunately, most college students are not paying attention to them. Therefore, school cafeterias are bearing responsibilities for solving these problems (Zeng, 2016).

Flourishing of campuses vicinity dining and potential problems should be improved, and provide a safe and hygienic dining environment for college students (Peng et al., 2017). After all, we cannot simply count on individual behavior change. Social environment need to be changed (Liu and Yang, 2010). Since convenience is a major consideration for college students dining, we suggest Taiwan government take it seriously.

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