



Insights on UEP'S Food Selling Policy: Level of Significant Relationship between Food Consumption Pattern, Health and Safety, and Knowledge on the Basic Food Groups among the Students in the University of Eastern Philippines Main Campus

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

This research was conducted to establish the relationship between the food consumption pattern, health and safety, and knowledge on the basic food groups among college students in the University of Eastern Philippines Main Campus. Specifically, this study aimed to determine the respondents' food consumption pattern as to breakfast, lunch, dinner, and snacks; their level of knowledge on the basic food groups (glow, grow, and go); their assessment on health and safety; and their level of knowledge on the basic food groups and their food consumption pattern. The descriptive-correlational method of research was utilized employing a modified questionnaire-checklist patterned from the instruments of the Cumbria County Council and the DOST Food Nutrition and Research Institute. The findings of the study showed the food consumption pattern of the student-respondents significantly affected their assessment on the health and safety of the food services of the food stalls and establishments. The level of knowledge of the student-respondents

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on the basic food groups has a significant correlation on their food consumption pattern. In conclusion, the food consumption pattern of the student-respondents significantly affected their assessment on the health and safety of the food services of the food stalls and establishments.

Keywords: Level of significance; food consumption pattern; health safety; food stall; basic food groups; Cumbria County Council.

1. INTRODUCTION

Food consumption needs of the adolescent groups merit special attention. College students have received little attention with an assumption that they are educated hence better nourished. However, studies on nutritional status among adolescents have shown that they have the poorest diet especially the teenage girls of any population Muchee [1].

The enormous physical, mental, and biological changes during adolescence increase nutritional needs. Diets lacking basic nutrients could retard physical growth or even delay the development of sexual maturity. On the other hand, inappropriate diet affects the risk of chronic diseases such as heart diseases and cancer. It is important that adolescents be given some guidance towards food consumption to meet their recommended dietary allowances and for optimal health.

College students residing in the dormitories perceive certain barriers to improving their nutrient intake, which could result in their poor consumption. These barriers could be the socio-economic characteristics such as age, gender, family size, educational background of parent, parents' occupation, family income and also lack of nutrition knowledge in terms of the three (3) basic food groups.

Even within meals there are rules by which foods are combined or separated. A study by Drewnowski as cited by Driskell [2] demonstrated the cognitive categories within which U. S. adult think about common vegetables. Asking subjects to judge the similarity of pairs of vegetables as well as to rate the vegetables along attribute scales (e.g., weak to strong flavored, nutritious to non-nutritious). Drewnowski discovered that adults use the dimensions of calories, color, and convenience but compatibility of vegetables is associated with color contrast. Thus, vegetable combinations such as broccoli and cauliflower were more acceptable than broccoli and Brussels sprouts.

The environments in which they reside can manipulate the idea that each adult individual is

able to make their own choices about food habits. For this reason, it may be no coincidence that young adults show some of the worst dietary habits of all ages, which also includes college students [3].

The articles that have been examined for this review show that the dietary behaviors and patterns of beverages and food among college students are heavily affected by food options on campus, near campus, taste and price, campus vendors do not offer the most nutritional foods, 40% of commuting students dietary intake of fat calories are consumed on campus. This study did not regard residential students at universities because they are offered a dining-hall meal plan. This would interfere with results focusing on à la carte vendors on campus and fast-food restaurants near campus. Still, another article examined that 50% of college students attain their lunch and dinner from the universities dining hall, while the other 50% remained having these meals elsewhere [4].

This shows that these vendors and near off campus fast food restaurants are significant for both types of students and affect their dietary intakes. It may be obvious that a college student preparing food from home or in their dormitory will result in a healthier meal than from a fast-food chain, but it is not so apparent that "campus area and fast-food purchasing are both independently associated with higher consumption of fat and added sugars" [5].

Clearly, many food options on campus mirror fast-food options. These options greatly impact an average student's college diet [6,7]. The pricing of these options may play a big role in why college students are opting out for poor choices. Conclusion Understanding the factors that influence a typical college student's diet can be revolutionary when trying to come up with a program to promote wellness and health. College students are more likely to make their food habits on what tastes best, and what is at their fingertips. Perhaps the importance of a good diet and nutrition is not being relayed to this population well enough. When shown graphical images regarding poor health, college students

responded greatly while surveyed. The same surveyors confided that undergoing interventions that showed unnatural and mysterious ingredients in sugary drinks could persuade them to stop purchasing those items (Block, 2013).

Consumption of healthful foods has long been an important concern to humans, particularly to students who are considered the future of the nation. College students are regarded knowledgeable and intelligent, as such, they are expected to choose the right kinds of food. However, students eat more processed foods, junk foods, fatty foods, pre-prepared food, or they crave for unhealthy food [8-10].

Food is an essential part of everyone's lives. It gives the energy and nutrients to grow and develop, be healthy and active, to move, work, play, think and learn. The body needs a variety of the following five (5) nutrients: protein, carbohydrates, fat, vitamins, and minerals. To stay healthy, the body does not need only the above five (5) nutrients but also need to eat right amount or quantity of food and good quality food preparation. Essential knowledge to nutrition is also fundamental to be able to maintain good health and function well whatever activity in the school will be performed by the students.

According to Marcia [11], college students most often face different schedule of activities which interfere very much in their feeding behavior. Changes in food pattern, physical exercise, stress, alcohol consumption, smoking and college lifestyle are some of the factors that have made college students more vulnerable to circumstances risky to their health.

Poor eating habit is another major public health concern among college students who experience transition into university life, during which they are exposed to stress and lack of time. Kurubaran [12] stressed out that college students adopt poor eating habits mainly because of reduced affordability and accessibility of nutritious food on the premises and the presence of an abundance of surrounding fast food outlets. Among many factors which have impact on the food consumption patterns of young people is the school environment in which students spend most of their time. College presents an environment that has been characterized by unhealthy dietary patterns and reduced physical activity which place students at a greater risk of weight gain.

In the Philippines, street vended foods are often appreciated for their unique flavors as well as for

their convenience. They are often the alternative meals taken by most college students which are affordable given their limited budget. Street food vending also provides a livelihood for many ordinary Filipinos who would not have enough capital to put up a full-blown food service business. However, it is also recognized that street-food vendors are often poor, uneducated, and lack appreciation for safe food handling. Consequently, street foods are perceived to be a major public health risk. If a community is to have the full benefits of street-vended foods with minimal risk of foodborne disease, government intervention, as well as the UEP Administration may be required to ensure that standard of safety for such foods is best attainable to protect the students and the university population. This could provide holistic intervention baseline to safeguard the health and safety of the student population.

University of Eastern Philippines college students tend to frequently buy food from the sidewalk vendors because of ease of access, limited time, busy schedule, convenience, taste, time, and price. These unhealthy practices of students may compromise their health conditions and academic performance. As a matter of fact, the data in the University Medical and Dental Health Services Unit for Fiscal Year 2018 showed that 1,269 students (senior high school and college) sought medical consultations and treatments while 505 students sought medical attention for the first quarter of 2019. However, the unit failed to present documents to prove such consultations and treatment.

With all this, it is a necessity to understand and properly practice food health and safety knowledge and behavior in preventing foodborne illnesses. Accordingly, the study conducted by Tonelada [13] showed that unsanitary environment, the lack of awareness of food safety regulations, poor knowledge of hygiene, and improper food handling practices among the food vendors can contribute to outbreaks of foodborne illnesses.

Preventing unhealthy and unsafe food in the university-based food service industry requires the development of food selling policies to ensure that all food services and activities carried out in the UEP Main Campus are following all relevant health and safety legislations. It is the primary duty of the University to pay particular attention to reasonable, necessary steps in safeguarding students' health and safety during their stay in the institution.

Over the years, the food consumption patterns and practices of the students in the University of Eastern Philippines (UEP) have evolved. It can be noted that consumption of instant and ready to eat food has become prevalent. Likewise, the eating practices of the University students are greatly influenced by their food choices and preparation practices. Sound practices in food preparation and consumption have been neglected by most of the students especially with the issue of time constraints in the preparation of healthful and nutritious food.

Thus, the researcher was prompted to conduct this study to determine the food consumption pattern and the health and safety of the college students in the University of Eastern Philippines (UEP) Main Campus, as basis in designing food selling policies in the University.

2. METHODOLOGY

The survey questionnaire was composed of four (4) parts. The first part determined the college student-respondents' socio-demographic profile, in terms of age, sex, parent's occupation, family monthly income, weekly allowance, year level, and nature of residence. The second part focused on the food consumption pattern of the college student-respondents, in terms of breakfast, lunch, dinner, and snacks. This part of the modified questionnaire was patterned from the instrument used by the Cumbria County Council. The third part assessed the knowledge of the college student-respondents on the basic food groups. This part of the modified questionnaire was patterned from the instrument used by the DOST Food Nutrition and Research Institute. The fourth part assessed the health and safety of the foodservices of the different food stalls and establishments in the campus in terms of aesthetic, nutritional, and safety values. This part of the modified questionnaire was patterned from the instrument used by Ubane in her dissertation.

A modified survey questionnaire-checklist was used in gathering data on the food consumption pattern and health and safety of the college students at the University of Eastern Philippines. The researcher first sought some possible instruments that could be used in this study. Hence, the instruments of the Cumbria County Council, the DOST Food Nutrition and Research Institute, and the questionnaire used in Ubane's dissertation. She modified the cited instruments

to ensure that the survey questionnaire-checklist was complete in all aspects and captured all the objectives of this study. Prior to the finalization of the questionnaire-checklist, the researcher conducted an ocular visit to the food stalls and establishments in the UEP Main Campus to determine if the contents of the said checklists suited to the actual locale setting.

The researcher, with the assistance of trained research assistants, conducted the survey to the college student-respondents who were buying foods from the various food stalls and establishments in the campus with the used of the questionnaire. Senior high school and college students were considered in this study.

Moreover, the researcher also conducted ocular survey to the food stalls and establishments which was also used as basis in developing insights for UEP's food selling policy. The survey focused on the foods they were selling, how these foods were prepared, the manner of selling, the utensils used, and the quality and quantity of foods.

No time limit was imposed on them to enable the respondents to have sufficient time answering such questions. A week period was allotted in gathering the necessary information for this study in which the researcher along with the trained research assistants went to the various food stalls and establishments in the University Campus during breakfast, snacks, lunch, and dinner. Hence, after the questionnaires were accomplished, the researcher retrieved all copies distributed and they were properly tabulated for easy reference in the administration of statistical treatment and analysis.

3. RESULTS AND DISCUSSION

Table 1 presents the responses of the college student-respondents whether or not they take their breakfast every day. The table shows that 265 or 69.37 percent responded "yes" while 117 or 30.63 responded "no". Based on the results, a greater number of college students of UEP Main Campus take their breakfast every day. Healthy nutritional choices are necessary for maintaining a healthy lifestyle. According to a survey conducted by Food Insight as cited by Allard [14] over 90% of Americans agreed that breakfast is the most important meal of the day, and yet a mere 44% eat breakfast every day.

Table 1. Respondents’ responses whether or not they take their breakfast every day

Responses	Frequency	Percentage
Yes	265	69.37
No	117	30.63
Total	382	100

Table 2 presents the responses of the college student-respondents whether they take their lunch every day. Out of 382 respondents, 338 or 88.48 percent responded that they take their lunch every day while 44 or 11.52 percent responded not. Based on the results, a greater number of the college students of the UEP Main Campus take their lunch every day.

3.1 Knowledge of the College Student-Respondents on the Basic Food Groups

Glow Foods: Table 4 presents the level of knowledge of the college-student respondents in terms of glow food groups. The table shows that water received the highest weighted mean of 4.47 interpreted as “very much knowledgeable” while fruits received the lowest weighted mean of 3.42 interpreted as “much knowledgeable”.

As shown in the grand weighted mean of 3.823, the college students of the UEP Main Campus were “much knowledgeable” on the glow foods based on the indicated food items. This disconfirms the findings of the studies conducted by the Centers for Disease Control and Prevention that young adults’ knowledge and

adherence of the national dietary guidelines are at a very low rate. The findings disconfirm the study of Muchee [1] that the college students had a poor knowledge of the energy regulating foods.

Table 3 presents the responses of the college student-respondents whether they take their dinner every day. The table shows that 329 or 86.13 percent responded that they take their dinner every day while 53 or 13.87 percent responded not. Based on the results, a greater number of the college students of the UEP Main Campus take their dinner every day.

Grow Foods: Table 5 presents the level of knowledge of the college-student respondents in terms of grow food groups. It shows that the highest weighted mean was on the chicken with a weighted mean of 3.53 interpreted as “much knowledgeable” while the lowest weighted mean was on yogurt with 2.40 “less knowledgeable”. The grand weighted mean of 3.140 shows that the college students of the UEP Main Campus were “moderately knowledgeable” on the indicated food items as part of the grow food groups. The findings disconfirm the study of Muchee [1] that the college students had a poor knowledge of the body building foods.

Table 2. Respondents’ response whether or not they take their lunch every day

Responses	Frequency	Percentage
Yes	338	88.48
No	44	11.52
Total	382	100

Table 3. Respondents’ response whether or not they take their dinner every day

Responses	Frequency	Percentage
Yes	329	86.13
No	53	13.87
Total	382	100

Table 4. Level of knowledge of the college student-respondents in terms of glow food groups

Glow Foods	Weighted Mean	Interpretation
Water (6-8 glasses)	4.47	Very Much Knowledgeable
Green leafy and yellow vegetables (3 servings)	3.58	Much Knowledgeable
Fruits (3 servings)	3.42	Much Knowledgeable
Grand Weighted Mean	3.823	Much Knowledgeable

Table 5. Level of knowledge of the college student-respondents in terms of grow food groups

Grow Food	Weighted Mean	Interpretation
Chicken (2 ½ servings)	3.53	Much Knowledgeable
Fish (2 ½ servings)	3.52	Much Knowledgeable
Eggs (1 piece)	3.50	Much Knowledgeable
Meat (2 ½ servings)	3.43	Much Knowledgeable
Milk (1 glass)	3.34	Moderately Knowledgeable
Shellfish (2 ½ servings)	2.76	Moderately Knowledgeable
Cheese	2.64	Moderately Knowledgeable
Yogurt	2.40	Less Knowledgeable
Grand Weighted Mean	3.140	Moderately Knowledgeable

Go Foods: Table 6 presents the level of knowledge of the college-student respondents in terms of go food groups. It shows that rice received the highest weighted mean of 4.33 interpreted as “very much knowledgeable” while margarine received the lowest weighted mean of 2.32 interpreted as “less knowledgeable”. Based on the grand weighted mean of 2.797, the college students of the UEP Main Campus were “moderately knowledgeable” of the indicated food items as part of the go food group. The study of Muchee [1] confirms the findings of the study, in which it found out that the college students had a good knowledge of the energy giving foods.

Table 7 presents the test of significant correlation between the food consumption pattern of the college student-respondents and the health and safety of the foodservices. Multiple Regression Analysis was utilized to test the said relationships Regression analysis shows that the F-value with significance value of 0.00000 is greater than the 0.05 alpha level. Therefore, the null hypothesis was rejected which means that there was a significant correlation between the food consumption pattern of the college student-respondents and the health and safety.

Close examination of the beta coefficients in Table 7 revealed that all variables in the food consumption pattern in terms of breakfast, lunch,

and dinner significantly predicted the assessment of the college student-respondents on the health and safety of the foodservices of the food stalls and establishments.

Table 8 presents the test of relationships between the food consumption pattern and the knowledge on the basic food groups of the college student-respondents. The Multiple Regression Analysis also showed that the F-value with significance values is greater than the 0.05 alpha level of significance. Therefore, the null hypothesis was rejected. Thus, there is a significant correlation between the food consumption pattern and the knowledge on the basic food groups of the college student-respondents.

The study of Muchee [1] affirms the results of the study that college students residing in the dormitories perceive certain barriers to improving their nutrient intake, which could result in their poor consumption and also lack of nutrition knowledge in terms of the three (3) basic food groups. Corollary, the study of Stockton and Baker found out that college students’ knowledge of nutrition does not always correlate with their eating habits because they consumed large amount of food even though they acknowledge its unhealthiness.

Table 6. Level of knowledge of the college student-respondents in terms of go food groups

Go Food	Weighted Mean	Interpretation
Rice (1 cup)	4.33	Very Much Knowledgeable
Bread and cereals (6-8 servings)	3.07	Moderately Knowledgeable
Noodles or instant noodles (6-8 servings)	2.91	Moderately Knowledgeable
Sugar/sweets (6-8 teaspoon)	2.73	Moderately Knowledgeable
Potato (6-8 servings)	2.63	Moderately Knowledgeable
Corn (6-8 servings)	2.62	Moderately Knowledgeable
Peanuts (6-8 teaspoon)	2.52	Less Knowledgeable
Cheese (6-8 teaspoon)	2.51	Less Knowledgeable
Butter (6-8 teaspoon)	2.33	Less Knowledgeable
Margarine (6-8 teaspoon)	2.32	Less Knowledgeable
Grand Weighted Mean	2.797	Moderately Knowledgeable

Table 7. Summary Result on the Test of Relationships between the Food Consumption Pattern of the College Student-Respondents and the Health and Safety

Food Consumption Pattern	F-Ratio	Significance F	R Square X 100%	Interpretation
Breakfast	25.40571	0.00000	6.28%	Significant
Lunch	34.13918	0.00000	8.26%	Significant
Dinner	20.04354	0.00000	5.02%	Significant

Table 8. Summary result on the test of relationships between the food consumption pattern and knowledge on the basic food groups of the college student-respondents

Basic Food Groups	F-Ratio	Significance F	R Square X 100%	Interpretation
Breakfast				
Go Foods	37.26741	0.00000	8.95%	Significant
Grow Foods	45.21545	0.00000	10.66%	Significant
Glow Foods	1.52000	0.21838	0.40%	Significant
Lunch				
Go Foods	35.46946	0.00000	8.56%	Significant
Grow Foods	35.46946	0.00000	8.56%	Significant
Glow Foods	5.94540	0.01521	1.54%	Significant
Dinner				
Go Foods	52.79966	0.00000	12.23%	Significant
Grow Foods	75.04041	0.00000	16.53%	Significant
Glow Foods	5.32488	0.02156	1.39%	Significant

3.2 Insights on UEP’s Food Selling Policy

3.2.1 Rationale

Consistent with CHED Memorandum Order No. 09, s. 2013 (Enhanced Policies and Guidelines on Student Affairs and Services) and DepEd Order No. 8, s. 2007 (Revised Implementing Guidelines on the Operation and Management of School Canteens in Public Elementary and Secondary Schools), the University of Eastern Philippines shall develop a policy on foodservices that includes safety and sanitary conditions and food choices of various food outlets and stalls within the compound of the institution. The UEP’s Food Selling Policy shall ensure availability of adequate, safe, and healthful food within its campuses and its immediate vicinity in accordance with the food safety and sanitary guidelines of the Department of Health.

The following insights, based on the significant findings of the study, should be incorporated in the development of the policy.

- **Food Services**

1. There should be a contract of lease for those occupying stalls in the business

arcade, commercial stalls, and other UEP establishments.

2. A memorandum of agreement shall be required to those operating in their own buildings within the campus and a permit from the ASBA shall be required to those operating food stalls in the sidewalk or those peddling.
3. The food service providers/food stall operators be issued permit and Certificate of Accreditation. They shall be required to submit the following documents as requirement for operation and accreditation: (1) Mayor’s Permit, (2) Sanitary Permit, (3) Health Certificate of food handlers and workers; and (4) Environmental Compliance Permit.

- **Food Selection**

1. Selling of the following food selection:
 - 1.1 Nutrient-rich food such as root crops, noodles, rice, corn, and its bi-products in natural preparation.
 - 1.2 Fruit and vegetables in season
 - 1.3 Healthy beverages such as milk, fruit juices and shakes
 - 1.4 Processed foods bearing the Sangkap Pinoy seal and approved by the BFAD

- 1.5 Meat, fish, and other sources of protein at reasonable amounts
2. Serving of nutritious and balanced meal
3. Use of iodized salt

- **Food Safety and Sanitation**

1. Keep the menu simple and keep the potentially hazardous foods to a minimum.
2. Extra care shall be observed in the protection of food and food products from contamination by keeping these covered or packaged above the ground or off the floor. Eliminate unnecessary handling of food and protect all food from physical contamination such as from sneezing, coughing, or touching dirty surfaces or containers.
3. Foods that are prepared at home and transported to a canteen/cafeteria inside the campus shall be kept covered and adequate temperature controls are provided.
4. Foods shall be protected from cross-contamination by separating raw animal foods from ready to eat foods during storage, preparation, holding, and display. Equipment and utensils used in raw animal foods must be thoroughly cleaned and sanitized before these can be used in the ready to eat foods.
5. Eating utensils shall be sanitized using hot water at least every four hours.
6. Food personnel must maintain a high degree of personal hygiene and cleanliness to conform to the generally accepted hygiene standards at all times during the entire work period. Prescribed outer garments shall be maintained clean and worn during the food preparation process. Hair restraints shall also be required. Smoking, chewing gum, eating, and drinking of food personnel are not allowed in the food preparation and service area. Access to the food preparation and service area shall be limited to the authorized personnel only.
7. Contact to the ready to eat foods with the bare hands of the food personnel is prohibited. Appropriate utensils or body surface isolation such as gloves shall be used.
8. Food personnel must wash their hands and exposed portion of the arms with adequate water and soap before beginning to work after any of the following activities:

using the toilet, handling raw food, coughing or sneezing, smoking, handling soiled items, disposing the garbage, and any other activities that may contaminate the hands.

9. All equipment and utensils coming into contact with foods must be washed, rinsed, and sanitized. Manual washing shall be made with three basins that are large enough for immersion of utensils, potable water shall be used and use of hot water is recommended.
10. Wet wiping cloths that are used for wiping food spills from food and non-food surfaces of equipment shall be stored in a clean container and must be treated with sanitizing solution at an appropriate concentration level.
11. Garbage and refuse must be kept in durable, easily cleanable, and insect and rodent proof containers. Waste water shall be disposed in an appropriate water sewer facility.

- **Implementation, Monitoring, and Evaluation**

1. Creation of Foodservices Evaluation and Accreditation Committee (FEAC), and food service coordinators which shall be responsible for the implementation of the policies and procedures.
2. There is a need to review existing policies and procedures and recommend or propose changes or new policies as maybe deemed necessary to improve the food services and operation of food outlets
3. Criteria on safety and sanitary conditions and food choices shall be set for the compliance of food outlets within the compound of UEP.
4. The FEAC shall periodically conduct orientation for food service providers/food stall operators on the policies and procedures of UEP on food safety, nutrition, hygiene, and sanitation.
5. Issuance of Certificate of Accreditation to food service providers/food stall operators which comply with the standards set by the University after evaluation by the Foodservices Evaluation and Accreditation Committee and approval of the University President.
6. Periodic monitoring of the compliance of the food service providers/food stall operators on the policies and procedures on food service management shall be made by the Foodservice Coordinators.

7. Foodservice Coordinators shall render the prescribed reports to the ASBA Director or the FEAC on any significant findings of the monitoring. The result of the monitoring shall be used as basis of the University on the renewal or revocation of the permit and the accreditation of the food service providers/food stall operator.
8. A mandatory evaluation shall be conducted annually to assess the status of the implementation of the policies and procedures.
9. An annual review of the policy is also required to keep it relevant to new laws and regulations and demands of the University.

4. CONCLUSION

The level of knowledge on the basic food groups, the college student-respondents assessed their level of knowledge in terms of glow foods as “much knowledgeable” while “moderately knowledgeable” in terms of grow and go food groups. Regarding the health and safety of the foodservices of the food stalls and establishments in the UEP Main Campus, the college student-respondents assessed the foodservices “much healthy and safety” in terms of aesthetic, nutritional, and safety values.

On the test of relationships between the food consumption pattern of the college student-respondents and the health and safety, it revealed that the food consumption pattern in terms of breakfast, lunch, dinner, and snacks significantly predicted the assessment of the college student-respondents on the health and safety of the foodservices of the food stalls and establishments. Moreover, the test of relationships between the respondents’ food consumption pattern and the knowledge on the basic food groups showed that there is a significant correlation between the food consumption pattern and the knowledge on the basic food groups of the college student-respondents in terms of glow, grow, and go foods. Finally, based on the findings of the study, insights were formulated for the development of UEP’s food selling policy as to food services, food selection, food safety and sanitation, and implementation, monitoring, and evaluation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Muchee TM. Food consumption patterns of Central Luzon State University students. *The PAHESCU Journal*. 2003; 4(1):37-43.
2. Driskell JA. Determinants of eating behavior. *Journal of the American Dietetic Association*; 2005.
3. Paeratakul S, et al. Fast-food consumption among U.S. adults and children: dietary and nutrient intake profile. *Journal of the American Dietetic Association*. 2003; 103(10):1332-1338.
4. Uglem S, et al. Body weight, weight perceptions and food intake patterns: A cross-sectional study among male recruits in the Norwegian National Guard. *BMC Public Health*; 2011.
5. Yannakoulia M, et al. Consumption of Vegetables, Cooked Meals, and Eating Dinner is Negatively Associated with Overweight Status in Children. Seventh Edition. New York, United States: Paperback New York Inc; 2010.
6. Huntsinger ET, Luecken LJ. Attachment relationships and health behavior: the mediation role of self-esteem. *Psychology and Health*. 2004;19:515–526.
7. Soliah L, Walter J, Antosh D. Quantifying the impact of food preparation skills among college women. *College Student Journal*. 2006;40 (4):729-739.
8. McIntyre J. LA survey of breakfast-skipping and inadequate breakfast-eating among young school children in Nova Scotia. *Canadian Journal on Public Health*. 2013;84:410-414.
9. Murdoch J, Marsden T, Banks, J. Quality, nature, and embeddedness: some theoretical considerations in the context of the food sector. *Economic Geography*. 2003;76 (2):107-125.
10. Shaw ME. Adolescent breakfast skipping; An Australian study. *Adolescence*. 2008; 33:851-861.
11. Marcia R, et al. Food behavior, body image and anthropometric indices of university students. *Nutritional Journal*. 2010;21:341-347.
12. Kurubaran DS, et al. New approaches to the study of dietary patterns. *British Journal on Nutrition*. 2010;11(34):10-11.
13. Tonelada CA, et al. Sanitary conditions of food vending sites and food handling practices of street food vendors: implication for food hygiene and safety.

- International Journal of Education and Research. 2018;6(3).
14. Allard S. The Best Time to Eat Breakfast, Lunch, and Dinner If You Want to Lose Weight. Accomplishment Report, UEP University Medical and Dental Health Services Unit; 2019.
Available:<https://www.goodtoknow.co.uk/wellbeing/best-time-to-eat-breakfast-lunch-dinner-115224>on May 28, 2019.

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