



Are the foods and drinks in your school canteen healthy? An Assessment of the Nutritional Value of the Foods and Drinks sold at the School Canteens of De La Salle Araneta University

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Abstract: Schools are the best places to implement solutions to over-nutrition and obesity since children and young adults spend most of their time in school and consequently, spend more time eating in school than at home. Thus, the need for a study to find out the quality of foods children and young adults eat at school canteens. This is a descriptive study aimed to assess the nutritional value of the foods and drinks offered by the three (3) school canteens of De La Salle Araneta University (DLSAU).

The data of the study were mainly derived from the ocular field observations of what kind of foods and drinks these three school canteens offer and what kind of food and drinks students from grade school, high school, and college buy and eat. The foods and drinks were categorized into healthy foods and drinks and unhealthy foods and drinks based from the 2010 Australian dietary guidelines for children and adolescents and from the 2012 dietary guidelines for Filipinos.

Results of the study showed that most foods and drinks of the three (3) school canteens were found to be unhealthy with one canteen serving nearly all unhealthy foods and drinks. Moreover, most students across all levels buy and eat unhealthy foods and drinks from these canteens.

The unhealthy foods and drinks students eat from these canteens are indicative of the rising trend of obesity in the Philippines and the global obesity pandemic.

Key Words: Food and Nutrition; Obesity

1. INTRODUCTION

1.1 Background of the Study

Overweight and obesity in children are considered problems because of their potential devastating health consequences—for instance, they

cause cardiovascular diseases and impaired fasting glucose (Wilborn et al., 2005). Their causes are as well complex and multi-dimensional encompassing physical, social and environmental factors. Amidst the complexities is the fact that overweight and obesity are phenomena in which the schools have roles to play. Being at the



helm of educating children, schools should see to it that children are cared for. Schools serve as second parents to their pupils and students and may contribute on how children may become overweight and obesity through the school canteens. The kind of food and drinks the canteen offers in the school may contribute to childhood overnutrition. Schools are the best places to implement solutions to obesity and overnutrition since children and young adults spend most of their time in school and consequently, spend more eating in school than at home. Thus, it is imperative to assess first the nutritional value of foods and drinks sold at private school canteens.

1.2 Review of Literature

Healthy and unhealthy foods and drinks

According to the 2010 Australian Dietary Guidelines for Children and Adolescents, Healthy foods and drinks comprise of the following: breads and cereals, rice, pasta, noodles, vegetables, fruits, dairy foods--reduced or low fat milk, yoghurt and cheese; lean meat, poultry, fish, eggs, nuts, legumes and water. On the other side, Unhealthy foods and drinks include the following: sugar-sweetened drinks including sports drinks, cordial fruit flavored drinks; deep fried foods, pastry-based or crumbled hot foods,

savory snack foods such as crisps, chips, biscuits; ice creams and ice confections such as chocolate-coated and premium ice creams, icy poles, and ice crushes; cakes, muffins, sweet pastries, slices, biscuits and bars. The 2012 Nutritional Guidelines for Filipinos have similarly advised the consumption of more fruits and vegetables in the Filipino diet and limit the intake of foods that are high in fats, sugar and salt.

School Canteen and unhealthy foods and drinks

There are no substantial literatures about the nutritional values of foods and drinks offered at school canteens. However, some studies support the idea that children might not be eating the right kind of foods at school. A study conducted in the USA showed that children at school may be exposed to large variety of unhealthy foods and drinks such as snack foods and soft-drinks which can be found on food stores inside the school (Anderson et al., 2003). A recent comprehensive assessment of the successful programs in preventing obesity in schools across the United States revealed that modifying the foods and drinks offered at school canteens such as offering and encouraging students to use water only as their beverage has been effective in preventing obesity among students (Nihiser et al., 2013). Another study at a primary school in Australia showed that children would buy more healthy foods and less unhealthy foods if



healthy foods are advertised and displayed well (Rexha et al., 2005). Results of a study in the Philippines on childhood obesity showed that children in private schools are prone to obesity because they are exposed to calorie-rich foods and sedentary behavior at home and in school (Tanchoco et al., 2006).

The link between consuming unhealthy foods and obesity

Excessive intake on the quantity and quality of food could result to an increase in weight and obesity. Research shows that poor diet in children contributes to overweight by increased reliance on fast food restaurants and fatty snacks which led to an increase in calorie intake (Hofferth & Curtin, 2003). A study revealed that eating large portions of food in pre-school aged children leads to obesity by producing excessive intake at meals (Fisher, Rolls & Birch, 2003). The 2002 World Health Organization (WHO) reports on diet, nutrition and prevention of chronic diseases pointed out that consumption of energy-dense foods which are foods that have high fat or sugar content could highly influence weight gain and overweight.

Health effects of overweight and obesity

The ill effects of overweight and obesity in the health and the future of children are widespread. Obesity in childhood has serious medical

consequences, which include increases in the rate of cardiovascular disease, hypertension, and diabetes (Bray, 2004).

1.3 Statement of the Problem

This study aims to assess the nutritional value of foods and drinks sold and offered by canteens found inside the school campus of DLSAU. Furthermore, this study also seeks to describe what kind of foods and drinks the students of the school canteens are buying and eating. Specifically, this study seeks to answer the following questions:

1. What are the kinds of food and drinks sold at V-MES Canteen, Elise Canteen and Tindahaneta Canteen?
2. In what category of healthy foods and drinks and unhealthy foods and drinks do these foods and drinks from the three (3) canteens belong to?
3. In what category of healthy foods and drinks and unhealthy foods and drinks do the students, which are divided into three types, are buying and eating from the three (3) canteens?
 - a. Grade school students
 - b. High School students
 - c. College students

1.5 Significance of the Study

This study will impact on students studying in this university. The result of the assessment would give insight if unhealthy foods are indeed offered in these canteens. This



assessment will be a prelude to suggesting the formulation of healthy food guidelines to be implemented in the two canteens in the desire to help reduce the double burden of malnutrition in the country.

1.6 Scope and Delimitation

The study has only used ocular observations in gathering data. Although the study has covered students from grade school, high school and college, it solely focused on the frequency of foods and drinks they bought and eat but did not include them as respondents. This study covered only the three canteens inside the school campus.

2. METHODOLOGY

2.1 Research Design, Sampling and Instrumentation

This study is purely descriptive in nature. Ocular field observation was used as its instrument.

2.2 Data Gathering Procedure

On July 1, 2013, at 0800 hours, the researcher went to V-MES canteen to do ocular observation. Using a pen and a small notebook, all kinds of foods were recorded. Examples of the foods that were recorded were candies, chocolates, burgers.

Recording of the foods went until 0900 hrs. The researcher went back at 1200 to record foods offered during lunch time and again at 1500 to record foods offered in the afternoon. On July 2, 2013 the same procedure was applied and the same time was followed in collecting data in Elise Canteen. Finally, on July 5, 2013 the Tindahaneta Canteen was also observed using the same time and method used in the previous two canteens. The recorded foods were then classified into healthy category and unhealthy category based on the 2010 Australian Dietary Guidelines for Children and Adolescents and the 2012 Nutritional Guidelines for Filipinos.

The researcher went back to V-Mes canteen on July 8, 2013 at 0900 hrs to 1000 hrs to observe students buying and eating at the canteen. The kind of foods and drinks students from college, high school and grade school who were eating and/or buying was properly recorded in a small notebook. The frequency of each kind of food or drink was recorded by marking a stick for each food or drinks a student bought or ate. On the same day the researcher went back to VMes and again conducted observations from 1200-1300 hrs and from 1500-1400 hrs using the same procedure. The researcher also conducted the same observations to Elise and Tindahaneta on July 9 and July 12 respectively using the same procedures. The recorded foods and drinks were then categorized into healthy

foods and unhealthy foods, healthy drinks and unhealthy drinks. The frequency on each kind of food or drink was then tallied.

3. RESULTS AND DISCUSSIONS

The amount of foods and drinks consumed by the pupils and students at school canteens could be very well high owing to the availability of foods and drinks from morning to afternoon.

The findings of Anderson et al., 2003 showed the same availability and accessibility of unhealthy foods and drinks to children. Tindahaneta was the worst canteen in terms of unhealthy foods and drinks. It was observed to offer nearly only unhealthy foods. The only healthy drinks it offered is bottled water; everything else was unhealthy. The result of the study of Tanchoco et al., 2006 confirms the assumptions that private schools might have contributed to overnutrition and obesity due to the Healthy availability and the amount of unhealthy foods and drinks their school canteens offered.

Table 3.1 The Healthy and Unhealthy food categories of the three (3) canteens of DLSAU.

Food Category	V-Mes Canteen	Elise Canteen	Tindahaneta Canteen
Healthy	Rice meals, vegetables, fresh fruits, bottled water, yoghurt	Rice meals, vegetables, fresh fruits, bottled water, yoghurt	Bottled water
Unhealthy	Candies, chocolates, curls, instant noodles, soft drinks, ice cream, coffee, packed cakes	Candies, chocolates, curls, instant noodles, soft drinks, ice cream, coffee, packed cakes	Candies, chocolates, curls, instant noodles, soft drinks, ice cream, coffee, packed cakes, doughnuts

Table 3.1 showed that there is a considerable amount of unhealthy foods and drinks sold at the three (3) school canteens.

Table 3.2 Frequency of Students buying healthy and unhealthy foods and drinks in a day at school canteens

Student	V-Mes Canteen		Elise Canteen		Tindahaneta Canteen	
	*H	*U	H	U	H	U
GS	38 24%	123 76%	19 19%	79 81%	18 22%	64 78%
HS	50 25%	148 75%	34 19%	141 81%	20 20%	78 80%
Col	63 30%	149 70%	41 23%	135 77%	27 22%	94 78%
Total	151 26%	420 74%	94 21%	355 79%	65 22%	236 76%



*H: Healthy Food and drinks
*U: Unhealthy Food and drinks

Figures in Table 3.2 clearly depict a bigger consumption of unhealthy foods and drinks and a lesser consumption of healthy foods and drinks in all student levels in all canteens. Interestingly, the college students have the lowest percentage of consuming unhealthy foods and drinks and the highest percentage of consuming healthy foods and drinks. This is probably due to the fact that college students are more informed and more mature than children.

4. CONCLUSIONS

4.1 Conclusions

The school canteen is one of the places where children and adolescents usually eat and dine, thus, it showed in this study that it may be one of the contributors to childhood and adolescent overnutrition and obesity. Furthermore, the findings support the increasing trend of overnutrition and obesity in the Philippines and the obesity pandemic many countries are experiencing all over the world.

4.2 Recommendations

In view of the findings of the study, the researcher proposes the following:

1. Conduct assessment studies on the nutritional value of foods on all food outlets outside the school campus, but within the vicinity of the school.
2. Conduct more assessment studies on the nutritional value of foods on the canteens of other private schools in Metro Manila and other provinces.
3. Encourage the school personnel such as the teachers and professors to teach their students and pupils to buy and eat only healthy foods and drinks at the school canteens.
4. Regulate the display and selling of all unhealthy foods in the three canteens of DLSAU.
5. Recommend to the Senate and House of Representatives the creation of a law regulating the selling of unhealthy foods in all private school canteens.

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