

Factors Influencing the Food Preferences of Students: Perspective in Developing Viable Canteen Management Program for BTVTED Students of Bulacan Polytechnic College

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The main problem of the study is how several factors affect the food preferences of the students of Bulacan Polytechnic College. The respondents were selected randomly from the different departments of the College. The predictors or the independent variables are demographic characteristics, food characteristics and menu frequency while the food preference is the criterion. Multiple regression analysis was used to identify the significant predictors of the food preferences. The null hypotheses about demographic characteristics, food characteristics and menu offering which show no significant effects on food preferences were tested using t-test for single effect and F-test for combined effects. The statistical analysis shows that daily allowances, food budget and menu offering were high significant predictors of food preferences. When taken singly (t-test), the combined effects shown by the F value of 48.002 at $p < .01$ probability are high significant predictors. Herewith is the viable canteen management program developed in the study.

Keywords: food preferences, canteen management

Introduction

Students' satisfaction on the food that the canteen offers is vital on menu planning. It is a requisite that the food preference of the students is appraised regularly in order to provide menu selection that will best fit the taste of the customers.

Thus, the school canteen or lunch order plays a vital role in providing children with a variety of healthier food which can be cost effective. In general, a menu should offer customers an in-house specialty that is offered all the time, and some varieties that are for sale only on a specific time or certain days of the week. It will also be easier for the staff to make orders and buy the food ingredients needed (Quigley & Watts, 2005).

According to Okely et al. (2006), the canteen can model healthier food choices that are tasty, interesting and affordable. This can influence food choices at school and to a wider community.

Mahreen (2010) viewed that students are investing a part of their pocket money into buying food items in and around schools. They need to be taught to see what they are getting in return. The canteen needs to have strict quantities of ingredients and standard serving sizes in order to accurately price recipes. There is a need for canteen operators and teacher to assess students' preferences of school canteen meal in terms of quality, variety and other variables that concern their satisfactions. The students' participation in planning school canteen meal would also help the canteen operators improve their menu, taking into considerations their preferences. With this, the school canteen operators would find it easier to create menu that is cost effective and adaptable to the students.

The canteen should be based on good management practices and be financially self-sustaining. Experience shows that, with good management and marketing practices, a canteen can provide healthy foods and also be financially viable. The school canteen is a small business. Like any business, it requires good management practices to be efficient and successful in developing a viable canteen management program.

The study draws theoretical support from Albert Bandura (2001) on social cognitive theory. Food choice comprises psychological and sociological aspects (including food politics and phenomena such as vegetarianism or religious dietary laws), economic issues (for instance, how food prices or marketing campaigns influence choice) and sensory aspects (such as the study of the organoleptic qualities of food). Also, environmental cause and increased portion sizes play a role in the choice and amount of foods consumed. The current study should consider factors like demographic characteristics, and menu frequency as influential factors to the food preference of the students, thereby making their choice and intake of the food different.

People depend their food decision with the environment. Thus, it has a big impact on people's food choices and eating behavior. There are two cognitive processes: reflective or impulsive where decision-making and choice behavior usually results from. People think carefully and rationally and they usually act upon their intentions if their decision-making is powered by reflective system. But if they act more automatically and spontaneously and are usually led by impulses they tend to operate through the impulsive system. These are the environmental cues that can strongly affect people's decision-making and behavior. When these insights are applied to the current topic of eating behavior, it is to be expected that the environment strongly influences such behavior when people make food choices via the impulsive system. Research on habits and information processing says that when the decision-making of people are powered by impulsive system, it is when their behavior becomes habitual and when people are not motivated or cognitively involved enough or are too distracted to engage in effortful reasoning and deliberation. Specifically, the environment is likely to determine their eating behavior to a large extent when people have well-developed eating habits, are not very much involved in their food choices, or do not invest time in thinking what to eat. This is when the school cafeterias offer great potential to improve students' eating behavior by giving those choices whether they are in the process of impulsive or reflective system; this implies that environmental cues can also push for more vigorous choices (Mensink et al., 2012).

Based on the Healthy Canteen Kit Canteen Manual by Neville (2006), theme days are a great way to trial new healthy items. Canteens may offer specialty for the day or a special menu as an alternative to the regular menu. This way, canteen staff can save time in preparing for a limited range of foods.

Spicer (2021) said that "operators have to be proactive in marketing new menu additions; this means spelling out reasons to purchase as well as communicating what they consist of".

Fontenot (2011) posted in her article that a new research from Oregon State University found out that in a day most freshmen are not even eating one serving of fruits or vegetables. If graded, most of the college students will be receiving a failing grade on their eating habits. The recommended minimum five servings of fruits and vegetables per day do not even come close to the recommended servings. Based on a research about eating habits, most of the freshmen from Oregon State University were not even eating fruits and vegetables a day. Males averaged about five servings per week.

According to Cruz, et al. (2009), the food guide pyramid is a graphic translation of the current “Your Guide to Good Nutrition” based on the usual dietary pattern of Filipinos in general. The usual Filipino diet consists mainly of rice. Rice contributes the major part of the carbohydrates in the diet together with bread, corn and root crops such as sweet potato, *cassava* and *gabi*. Therefore, carbohydrate foods are at the base of the pyramid and are for liberal consumption to meet 55 to 70% of energy needs. A viand or *ulam* is a combination of vegetables and fish or other protein sources, capped by fruits. Vegetables and fruits constitute the second level of the pyramid. Leafy greens and vitamin C rich fruits are the best sources of vitamins and minerals, plus dietary fiber or roughage. One is advised to eat more of these foods. The third level consists of animal protein foods, like fish, meat, poultry, seafood, milk and dairy products, as well as dried beans and nuts. These foods are recommended for moderate consumption as they supply high quality protein, vitamins and minerals. Finally, at the tip of the pyramid are the fats and oils that are to be taken just enough. In general, however, the Filipino diet lacks fat. On the average, Filipinos are only taking 15% of the calories from fat, which is one of the reasons why the total caloric intake is very low. One can improve caloric intake by consuming enough visible fats such as margarine and butter, as well as invisible fats contained in animal foods and some fruits and nuts. The Food Guide Pyramid teaches the principle of eating a variety of foods every day at the right amounts. Rice and other cereals occupy the major bulk in the diet, while fats and oils share the least in volume and bulk. Vegetables take up a bigger area than fruits in volume and bulk. The guide teaches moderation in some while emphasizes the importance of other foods. The food guide pyramid is one of the main nutritional and dietary tools and guidelines developed by the FNRI to help the Filipino achieve good health and nutrition.

Donadinia, et al. (2012) showed in their study the initial response of preschoolers aged four to five with the different preparation methods of vegetables prepared in three different ways: raw, boiled and oven-baked. The result shows that vegetable liking depended significantly on the vegetable type, the method of preparation which modulates the effect of vegetable type, and the heterogeneity in individual children response. Nearly one child out of two related vegetable acceptance to sensory characteristics of vegetables. For sensory oriented children, the acceptances of sweet and with original-colored vegetables are with high acceptance than those with bitter and tough texture. These results help to optimize the sensory properties preferred by children through the selection of the most appealing preparation method for a given vegetable. Schools are being encouraged to offer special meal deals to lure pupils away from local takeaways and into dining halls for healthier lunches.

Healthy eating doesn't have to be expensive or time-consuming. The school canteen or lunch order plays a vital role in providing children with a variety of food which can be cost effective. In general, a menu should offer its customers several items that remain the same, with variety provided by specials that are for sale only at certain times or on certain days of the week. Priest (2013) noted that planning menu helps to control the quality and cost of food that is served. It will also make it easier for staff to order and buy the food needed (Quigley & Watts, 2005)

According to Mahreen, et al. (2010), the food was found to be repetitive and limited lacking the nutritional value needed by the students. Students found canteen food quite expensive. Food items must be affordable yet nutritious so that the students would be satisfied. A variety of food geared towards the total well-being of the clients should be provided.

Schools are in a good position to endorse healthy food related behaviors in students and help ensure appropriate food intake (O'Toole, Anderson, Miller & Guthrie, 2007). Food items sold in and around the school during school hours/recess play a special role in school life because they provide refreshment and fulfill energy requirements of students. They have an impact on curricular and co-curricular activities and wellbeing of students and the school community. Food can be dangerous if not properly handled, prepared and stored. Opportunities to eat and drink at school should be used to encourage greater daily consumption of fruits, vegetables, whole grains, and nonfat or low-fat dairy products. Although canteen sold appropriate number of foods as per the needs of students, served food was not always fresh, newly cooked or prepared. It was concluded that there was a need to provide proper training for canteen staff so that they would improve their skills on proper food handling, preparation, and selection, customer satisfaction and quality management of the canteen.

Menu Frequency and Food Preference. Mahreen (2010) citing Maniquiz (2009) said that the food was found to be repetitive and limited. Students found canteen food quite expensive. It was recommended that the heads of the teachers' cooperative supervise and monitor the activities of their canteen staff emphasizing efficiency and effectively. Food items must be affordable yet nutritious so that the students would be satisfied.

Pupils indicated that they would like to know the menus in advance. This will give them the opportunity to see if they like the meals on offer and bring money with them to buy a hot meal. Improving the quality of school meals often includes a change in preparation of school meals, e.g. bake, broil, roast, or stew meat and fish instead of frying (Osganian, et al., 2000). However, limiting menu choice by simply changing or banning foods from the menu could result in an increase of children who eat unhealthier products outside the school gates (Fewell, 2005).

From the Healthy Canteen Kit Canteen Manual, Neville (2006) said that the canteen should be based on good management practices and be financially self-sustaining. Experience shows that, with good management and marketing practices, a canteen can provide healthy foods and also be financially viable. The school canteen is a small business. Like any business, it requires good management practices to be efficient and successful.

Demographic Characteristics and Food Characteristics Related to Food Preference. Female students were more likely to read food labels and eat breakfast, but they only averaged four servings of fruits and vegetables a week and consumed less fiber. Female students also skipped fewer meals and ate in college dining halls more often. Both male and female students consumed more than 30 percent of their calories from fat. Not all fat is bad, but it's likely students aren't indulging in healthy omega 3s or monounsaturated. Chips and fries and ice cream are more likely to be found in abundance in their diets than salmon or nuts. "Health is an area being neglected, yet all the available researches show that healthy habits and healthy kids can lead to better academic success. We are doing a disservice to our kids by not teaching them these essential life skills," according to Brad Cardinal, a co-author of the study and a professor of exercise and sport science at Oregon State.

The food items that were mostly liked by pupils were fast food and fruits. The least liked foods were traditional snacks and they did not like vegetables and traditional snacks. The findings concluded that the factors that affect the preference of food intake of school children were parent's knowledge and attitudes towards food intake, peers influence, TV advertisement and sensory characteristics of foods.

Managing School Canteen. School canteens can play a pivotal role in effecting behavioral change because they are ideally placed to directly influence children's lives and impact their food choices. Most adult food preferences are formed during childhood so it is critical that efforts are made to significantly improve the availability of healthy food options at school. An ideal way is to provide organic alternatives away from conventional, highly processed foods containing too much fat, salt, sugar and artificial additives.

Many school councils have contractual arrangements in relation to their canteens and these arrangements need to be honored. School that has a specific relationship with a retail shop for the provision of school foods and drinks needs to consider how this policy can be applied. Changes to the school canteen menu or food service will vary from school to school depending on variety of factors such as the number of days per week the canteen is open and food preparation.

A study confirms that the school canteen is a means of affecting children's eating habits. Thus, improvement in the foods sold through schools provides an important contribution to model supportive environments for healthy food choices (Finch, et al., 2006). Children's and young people's food choices usually do not take into account their nutritional needs. They are rather influenced by their family habits, culture and socio-economic situation (Carvalho, 2013; Loureiro, 2004). As children grow up, the family's impact on their food choices tends to decrease whereas the peers' influence tends to increase, that helping adolescents to make their personal decisions becomes a priority and, naturally, the school plays an important role in their health education (Carvalho, 2013; Currie, et al., 2012; WHO, 2006).

Drummond, et al. (2011) noted that, in Australia, school canteens are an integral part of the school environment and an ideal site to encourage healthy eating. However, when the canteen is not supported within the school system, healthy menus may be difficult to implement. The school setting is a crucial part of the social environment that shapes eating behavior, especially given that children's food preferences are learned through repeated exposure to foods. School food services are an integral part of the school environment and are an ideal site to focus efforts on improving the nutrition of school children. However, research indicates that many school food services face myriad of concerns in their provision of healthy food items. Although school food services should provide a practical example of good nutrition by supporting the nutritional education provided in the classroom, many do not. If the school relies on the school food service to make a profit, those making the financial decisions within the school may believe that products containing high fat and sodium are thought to be most profitable. Given the place of school canteens within the school system, there are ethical challenges that require attention regarding the sale of such products. This raises concerns regarding the effectiveness of the entire school system in its delivery of healthy behavior.

This paper aimed to determine if several factors influence the food preferences of the students of Bulacan Polytechnic College (BPC) to serve an input to a viable canteen management program. Specifically, the study sought to answer the following questions:

1. How may the following factors hypothesized to influence the food preferences of students be described in terms of:

1.1 Demographic Characteristics of the Respondents

1.1.1 Age;

- 1.1.2 Gender;
- 1.1.3 Year level;
- 1.1.4 Daily allowance;
- 1.1.5 Food budget; and
- 1.1.6 Total monthly family income

1.2 Food Characteristics

- 1.2.1 Portion/size of meal;
- 1.2.2 Cooking preparation;
- 1.2.3 Food presentation according to type of menu; and
- 1.2.4 Value for money/ food budget.

2. What are the food preferences of the students as regards to:

- 2.1. Heavy Meal (with rice and side dishes)
- 2.2. A.M / P.M Snacks (Favorite Snacks)

3. Are there significant influences of the various factors on the food preference of the students?

4. What viable canteen management may be proposed based on the findings of the study?

Students' satisfaction on the food that the canteen offers is vital to menu planning. Therefore, it is a requisite that the food preference of the students is appraised regularly in order to provide menu selection that will best fit the taste of the customers. The findings may provide useful and relevant information that would eventually help for the following purposes:

BTVTEd Students School Canteen Operators. The study may provide baseline data that provide the concerns of the students, specifically the factors influencing their meal preferences that would eventually provide satisfactions to their needs and may deepen their awareness of the concerns and preferences of the students that would help them in planning menu for the students and in providing satisfaction to their needs that is beneficial for both the business and the clients.

School Administrators. The results may also be useful for the school administrators so they may be conscious of other factors influencing the food preferences of the students, specifically in providing safe and secured environment for the wellness of the students in the development of a canteen management program for the students.

Figure 1 presents the conceptual model that was used in determining the factors influencing the food preferences of the students. The factors that influence the food preferences of the students were demographic characteristics, food characteristics, and frequency of menu offering.

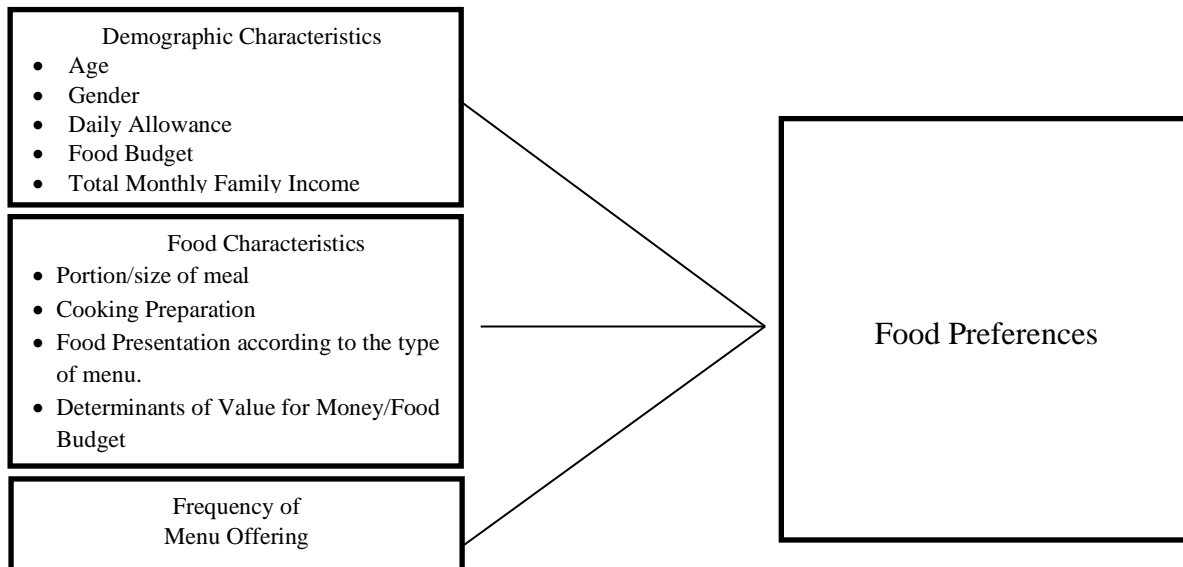


Figure 1 – Conceptual Model of the Study

The independent variables of the study are the demographic characteristics of the respondents described in terms of age, gender, year level, daily allowance, food budget, and monthly income. The food characteristics were appraised in the light of the following criteria: portion/size of meal, cooking preparation, food presentation according to type of menu, and value for money. Menu frequency was assessed in terms of offering of the menu whether it is offered daily, four times a week, two times a week, or once a week. Food preference was evaluated in terms of preferred food being offered during snacks and lunch time.

Food preferences of the students are significantly influenced by demographic characteristics, food characteristics, and frequency of menu offering.

Methodology

The descriptive correlation method was employed in the study. It is conducted simply to describe individual variables as they exist naturally (Gravetter, et al., 2009). A correlational design is appropriate for this study because it allows two or more variables to show if they have a positive or negative relationship.

Since the study examined the influence of demographic characteristics, food characteristics and menu frequency on food preferences of the students, the descriptive correlation was the most appropriate method in determining the degree of relationship between two or more variables.

The respondents of the study were obtained using systematic random sampling to select sample members from a large population of one thousand two hundred and thirty-two (1,232) students who were enrolled at Bulacan Polytechnic College. The number of respondents was determined using Slovin (2013) formula with a margin error of 5%.

The instruments were constructed by the researcher guided by the literature on the factors influencing the food preference of the students. The instrument used was composed of three parts. The first part elicited information on the demographic characteristics of the respondents such age, gender, daily allowance, food budget and total monthly income. Part two of the instrument assessed the food characteristics pertaining to the portion/size of meal and beverages, cooking preparation according to type of menu and the determinants of value for money. The third part assessed the frequency of food offered in the menu list. The last part evaluated the food preferences of the students specifically during am/pm snack and lunch pertaining to light meal or heavy meal.

The content validity procedure was utilized in validating the instrument. According to Polit and Beck (2008), the procedure deals with finding out the degree to which an instrument adequately covers the construct domain.

The mode of data gathering was questionnaire method. Each respondent was given a structured set of questions which were formulated by the researcher.

In order to analyze and interpret the data gathered, the following statistical measures were used; the demographic characteristics of the respondents were described using mean; and the food characteristics and food preferences were processed using frequency counts and weighted means were analyzed.

Results and Discussion

Factors Influencing the Food Preferences of Students

The determinants of demographic characteristics with the corresponding mean amount are as follows; daily allowance (P87.50), food budget (P43.20) and total monthly family income average (P17, 500.85). For the food characteristics as a whole, the extent of contentment of students with the determinants of food characteristics is “moderately preferred”. The frequency of menu offering (cycle), has “least preferred” extent of influence; this means that students would not like to have the same menu all the time.

Determinants of Food Preferences as to; AM/PM Snacks, Light Meal and Heavy Meal (with rice and side dish) -The extent of food preferences of students perceived as “moderately preferred” that is closely to the extent of menu frequency.

The relationship between food preferences of the students with demographic characteristics, food characteristics and frequency of menu offering described as the demographic profile, food characteristics and menu frequency has a significant influence with food preferences. The total family income is not significant with a level of .337, much higher than the 0.05 level of significance. On the other hand, all of the determinant factors are correlated to food preferences but not all are significant. The food budget and the menu frequency are significant with the food preferences of the students.

Below is the viable canteen management developed based on the findings. It is evident with the results that the given determinant factors and their influences to food preferences are great predictors of a feasible canteen management program.

Canteen Management Program Developed

Data Interventions	Program Developed
<p>1. Mean Average Daily Allowance – P 87.50</p> <p>2. Mean Average Food Budget – P43.20</p> <p>3. Most Preferred Items:</p> <p> a. Portion/Size</p> <p> Rice: Double Cup Serving Unlimited Rice</p> <p> Viand: Equal Portion of meat and sauce/soup</p> <p> Beverage: Bottomless Iced Tea</p> <p> b. Food Presentation Budget Meal Menu</p> <p> c. Food Preference</p> <p> Viand: Fried Chicken Pork chop Sinigang Beef Nilaga</p> <p> Chopsuey Ginisang Toge Dessert: Milk and Ices Snacks: Lugaw Pasta Skewered Fruits Cart Foods Pastries</p>	<p>Based on the given data the following programs are developed:</p> <p> 1. Menu Development</p> <p> <u>A la Carte Items Price</u></p> <p> Double Serving Rice – P15.00 Unlimited Rice – P20.00 Bottomless Iced Tea – P30.00 Viand (any choice) = P35.00 Lugaw with Egg – P15.00 Spaghetti – P15.00 Banana/Camote que – P10.00 Turon Fish balls/ Squid balls – P5.00 (per stick)</p> <p> Budget Meal P45.00</p> <hr/> <p> Set A Set B Set C Set D</p> <p> 1pc Fried Porkchop Beef Pork Chicken Nilaga Sinigang Chopsuey GinisangToge Rice Rice <u>Rice Rice Yema</u> <u>1pc Banana</u></p> <p> All served with 8 oz. Iced Tea</p>
<p>4. Comments/Suggestions</p> <p> a. Physical Aspect</p> <p> - Interior Design and Dining Area Arrangement</p> <p> - Un-cozy View</p> <p> - Open Walled Dining Area</p> <p> - Availability of Wash area in the dining hall.</p> <p> b. Service</p> <p> - Availability of drinking water</p> <p> - Quick Service (bussing of soiled dishes)</p> <p> - Presence of household pets</p>	<p>2.To provide a cozy experience to clients the following:</p> <p>- Well-ventilated and screen walled Dining area will be provided.</p> <p>-Lay-out of the dining area will be maximized to a convenient space.</p> <p>- For sanitary purposes, a wash sink will be installed.</p> <p>-Vacant lot will be landscaped to provide outside seating area.</p>
	<p>3. To provide excellent customer service, the following practice will be administered:</p> <p>- train all staff to treat</p>

- customers equally and provide services beyond their expectations.
 - train staff in giving a quick service especially in clearing out soiled dishes at all times.
 - for safety and security purposes, the cleanliness and orderliness of the dining area must be observed at all times.
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A closer look at the canteen management program developed shows that facilities or physical characteristics and sanitation practices are one of the concerns the students have with the current status of the school canteen that they would like to address the school administration. The BTVTEd department head is developing a canteen management program.

Food handling procedures are referred to as the kitchen procedure and portioning technique of the staffs as well as the bussing and cleaning procedure. The presence of household pets roaming around the dining area particularly several numbers of cats tops the concerns of the students as seen in this table. Some comments are referred to unavailability of wash area.

The structure of the canteen is an open-walled area, closely like a huge gazebo. The students are concerned about the dusts and fumes from the garden and landscaper around the area that fly their food.

Programs are developed in order to create a feasible canteen management. As clearly stated in this table, the researcher created a possible and feasible menu based on the mean average of daily allowance (P87.50) and food budget of the students (P43.20). With the computed price menu per meal amounting to P45.00, it is more likely students will consider adjusting their food budget to P45.00 than the usual P43.20.

The physical and customer service aspect of the program is based on the collected data from the given comments and suggestions of the respondents.

Conclusions and Recommendation

Based on the findings the following conclusions were drawn: 1) there is significant relationship between the daily allowance and the food preferences of the students; 2) the food budget and menu frequency are highly significant with the food preferences of the students; 3) there is in significant relationship between the demographic characteristics particularly the gender, age, year level and food preferences; 4) the food characteristics have no significant relationship with the food preferences of the students; and 5) it is therefore concluded that the determinant factors are vital in developing a canteen management program, given the main clients are the students. Meeting the demands, needs, and preferences of the students establishes a viable canteen management program. Not to highlight the insights and suggestions of students pertaining to physical and sanitary preferences of the students.

In view of the conclusions drawn, the following recommendations are proposed: 1) the determinant factors influencing the food preferences of the students are necessary in creating a menu for the students. It is then recommended conducting a survey regularly to update the program in giving satisfactory service to the clients. This way, menu choices may be enhanced; 2) in any business, it is suggested to invest on marketing techniques or strategy. Menu should be emphasized and updated as it is the guide to introduce the product; 3) in planning a menu, always consider the preferences of the client, to achieve a long-term goal in the business and to make both ends meet; and 4) a program is developed based on the given data that may be helpful in conducting a feasible study. With the constructed menu, physical layout and customer service training program developed in the study, this study may be helpful in guiding future researcher aiming to have a viable canteen management program.

References

1. *Carvalho, GraçaSimões de Reis, Elsa: Students' food consumption in a school canteen: analysis of what they choose from the canteen gallery and what they discard, by gender and age. Aarhus University (2013).*
2. *Claire Drummond, Lorraine Sheppard: Examining primary and secondary school canteens and their place within the school system: a South Australian study; Health Education Research, Volume 26, Issue 4, August 2011, Pages 739–749, <https://doi.org/10.1093/her/cyr036> Published: 19 May 2011*
3. *G.Donadinia M.D., Fumia S. Porrettab: Influence of preparation method on the hedonic response of preschoolers to raw, boiled or oven-baked vegetables, Author links open overlay panel Volume 49, Issue 2, December 2012, Pages 282-292*
4. *Faiza, Mahreen: International Journal of Business and Social Science: Lecturer, Jinnah Islamia College for Women, Peshawar. Pakistan.2010.*
5. *Fewell, A. The Sudexho School Meals and Lifestyle Survey 2005. Summary Version. Surrey:Sodexho Limited, (2005)*
6. *Finch, Meghan, Sutherland, Rachel, Harrison, Michelle, Collins, Claire Australian & New Zealand Journal of Public Health; Jun2006, Vol.30 Issue 3, p247-251, 5p (2006)*
7. *FrederikeMensink, Saskia Antoinette Schwinghammer, and Astrid Smeets: The Healthy School Canteen Programme: A Promising Intervention to make the School Food Environment Healthier. The Netherlands Nutrition Centre, P.O Box 85700, 2508 CK the Hague, the Netherlands (2012)*
8. *Kelly Neville, Healthy Canteen Kit-Canteen Manual, Dept. of Education-Australia (2006)*
9. *Okely, BoothM AD, Denney-Wilson E, Hardy L, Yang B, Dobbins T (2006). Nsw Schools Physical Activity and Nutrition Survey (SPANS) 2004: Summary Report. Sydney: NSW Department of Health.*
10. *Osganian, S.K., M.K.Ebzery, D.H. Montgomery, T.A. Nicklas, M.A. Evans, P.D. Mitchell, L.A. Lytle, M.P. Snyder, E.J. Stone, M.M.Zive, K.J. Bachman, R. Rice, and G.S. Parcel. Changes in the nutrient content of school lunches: results from the CATCH Eat Smart food service intervention. Prev. Med. 1996, 25:400-412.*
11. *Quigley, R. and Watts, C.A. (2005). A Rapid Review of the Literature on the Association between Nutrition and School Pupil Performance. Wellington: Obesity Action Coalition.*
12. *Terrence P. O'Toole PhD, Susan Anderson MS, R.D. Clare Miller MS, RD Joanne Guthrie PhD: Nutrition Services and Foods and Beverages Available at School: Results From the School Health Policies and Programs Study 2006. RD First published: 28 September 2007 <https://doi.org/10.1111/j.1746-1561.2007.00232.x> Citations: 135*
13. *Virgilio A. Cruz, QuennieZendy T. Hisa, Mario G. Imson and David A. Mang-usan, Obesity in School-Aged Children: Prevalence and Causes (2009). A simple and easy-to-follow daily eating guide for Filipinos.*