

# Management and Operations of School Canteens: Basis for an Enhanced Canteen Development Program

Doriden de Classica A. Fabre<sup>1\*</sup>, Eleuteria R. Pacpaco<sup>2</sup>

<sup>1</sup>Department of Education, Ilocos Sur Division

<sup>2</sup>College of Teacher Education, University of Northern Philippines

\*Corresponding Author: [fabredoriden@yahoo.com](mailto:fabredoriden@yahoo.com)

**Abstract** – Various observations in the food preparation, nutrition and health, safety and food handling, types of foods served, facilities, costings, and the like in school canteens paved the way to study the way a canteen is being managed and operated. This study determined the management and operations of school canteen: as a basis for an enhanced canteen development plan. This research utilized the descriptive-correlational method of analysis. A survey questionnaire-checklist gathered the data from 21 canteen managers of selected public secondary schools in Ilocos Sur. Frequency and percentages, mean, and multiple regression analysis analyzed the data gathered. Canteen managers were dominated by females, married, have been teaching for 1-3 years. The majority has Masteral units. Have attended 6-10 training programs, have been canteen manager for 0-4 years and have received 0-4 canteen awards. The status of canteen management and operations is "High." The profile of the respondents has no significant correlation to the components of canteen management and operations. An enhanced canteen development plan was proposed to improve further canteen services that will uplift the health of students and the standards of the school.

**Keywords:** Canteen managers, management and operations, school canteen, canteen development program

## 1. Introduction

The school canteen plays a vital role in promoting healthy foods and creating a culture of healthy eating. It is a great place to promote the enjoyment of healthy eating. Students patronize the canteen regularly. The food purchased significantly contributes to their total food intake, habits, nutrition, and preferences. Therefore, it makes sense to ensure that the best food possible is available to enhance their ability to learn and take in the information presented to them in class.

The school canteen follows guidelines on operational management set by the Department of Education (DepEd) through DepEd Order No. 8 s. 2007, the revised implementing guidelines and management of schools canteen in the elementary and secondary level. These guidelines are hereby issued to rationalize the operation and management of the school in canteens and to ensure that school canteens shall help to eliminate malnutrition. Schools are the second home of students; this is where they eat and buy their food,

so every canteen managers make sure that the food that students eat is safe, clean and healthy.

In the study of Miguinto and Capunan (2019), the DepEd is strongly committed to support students' health and well-being through the curriculum in schools and arrange initiatives that offer opportunities to promote healthy diet and nutrition. Thus, the school canteen is an integral part of the school environment and should offer a practical example of good nutrition.

Canteen managers under the DepEd must set a good example to students and prepare a meal/snack that is healthy and affordable for them. If the education sector will make more efforts to surround children with the need for healthy foods then, it can help them actively promote good eating habits and proper food preference. It is, therefore, significant to study how the management and operation of the school canteens as it can be a basis for an enhanced canteen development program.

As cited in the study of Galamgam (2018), the environment can exert a strong influence on people's food decisions. To facilitate students to make more healthy food choices and to develop healthy eating habits, canteen managers must ensure that the school food environment must be healthy.

Selling unhealthy foods that are high in sodium, fats, and monosodium glutamate should be prohibited as stated in DepEd order 13, s 2017 on the "Policy and Guidelines on Healthy Food and Beverage Choices in School and Offices." Canteen managers in public secondary schools are teachers who also have teaching loads and other school concerns like other ancillary jobs that they may not have full concentration on managing the canteen. School heads and canteen managers must prioritize healthy food offerings to ensure the nutrition of the students.

Adunna (2013) emphasized that along the line of canteen management is the need for an improved system to boost not only sales but also the efficiency of its operations. Besides providing nutritious and affordable foods, the canteen should be based on sound management practices and be financially self-sustaining. Canteen operators must ensure that their workers responsible for the handling and preparation of food don proper clean attire such as aprons and gloves. The floor must be swept and mopped to keep flies and other household pests at bay. Tables and chairs must be wiped and be kept stained free. Utensils such as plates and glasses must be washed thoroughly with detergent and disinfected in hot water to remove stubborn stains. (Seramban, 2013).

According to Bactad et al. (2017), the school canteen is one of the busiest places in the school. This place is also one of the most visited in the school, usually two to three times a day by each student. The canteen also serves as a place where students can spend their leisure time and refresh themselves through a relaxing conversation. It is also a great place to promote the enjoyment of healthy eating.

According to Roven et al. (2014), a particular focus on school policies, including regulation on food sold at the tuck shop based on its nutritional value and control of food practices, is needed. Such strategies need to be tailored to the specific

settings and socio-economic conditions, even though this might be challenging.

Johannes (2013) discussed that school canteens should provide cheap, sanitary, nutritious food such as fresh milk, fresh fruits, and fresh drinks, boiled root crops, high-calorie indigenous recipes, and the like. Canteen personnel handling food in the canteen should be required to undergo training for food handlers, obtain a certificate of good health from the municipal health department, and observe hygiene. Operational practices that will be to the welfare of the students, teachers, and the school as a whole as well as any violation of the provision of the memorandum of agreement and the operational management guidelines should be considered as grounds for the return of the canteen operation to the school.

The health ministry of the DepEd must enforce the guidelines strictly to ensure that school canteens provide healthy and nutritious meals for the children and impose penalties on canteen operators who refused to cooperate.

As per DepEd order 14, s 2005, on the involvement of LGUs/RHUs, school officials should seek the assistance of Local Government Units (LGUs) and Rural Health Units (RHUs)/Barangay Health Center (BHUs) in regulating the sale of food and beverages by ambulant vendors. Presidential Decree No. 856, also known as the code of sanitation of the Philippines, allows ambulant food vendors to sell only bottled drinks, biscuits, and confectionaries, and other pre-packed foods. They are prohibited from selling foods that require utensils.

According to Bactad et al. (2017), aside from food spoilage and food sanitation, food posters are also the problem of the students. Most of the canteens sell foods and beverages that are way too far from the posters they posted, wherein their food products are beyond students' expectations.

On the procedural guidelines under Do. 8, s 2007 "Revised Guidelines on the Operation and Management of School Canteen in Public Elementary and Secondary Schools it is stated that: 5.1 all school canteens are required to secure the following permits/clearances: Sanitation Clearance/Permit from the local Health Department, Health Permit of canteen personnel/staff from the city/municipal health

office, & Authority from the school head/principal to Operate and Manage the School Canteen (for teachers' cooperatives only).

Sanitary permit shows compliance in the credibility of food entity. According to PD 856 (Sanitation code), Sec. 15 Health Certification, "No person shall be employed in any food establishment without a Health Certificate issued by the local health authority.

Under the DepEd order no. 13 s 2017, otherwise known as the Policy and guidelines on healthy food and beverage choices in schools and DepEd offices, food products with nutritional facts shall be evaluated using the cut off points for three categories: Green category that includes foods and drinks that must always be available in the canteen. These foods and drinks are the best choices for a healthy school canteen as they contain a wide range of nutrients and are generally low in saturated and trans-fat sugar and salt. Furthermore, these food products include nutrients in adequate amount low in fat and sodium to prevent heart diseases, cancer, and high blood pressure.

The yellow category includes foods and drinks that should be served carefully. These foods and drinks contain some nutrients but at the same time also contain large amounts of saturated or trans-fat and or sugar or salt. If eaten in large amounts, these foods may contribute to excess calories. These foods may be served once or twice daily (Tuesday and Thursday), in smaller servings, and should be less prominent in the canteen menu. In an article by Malipot (2019), he quotes that Foods under the "Yellow" category should only "be served once or twice a week only, in small servings, and should be less prominent in the canteen menu," DepEd said. Furthermore, Foods and drinks under the "Yellow" category include 100 percent fresh fruit juices; fried rice, biscuits, pancakes/waffles, champorado, pancit, arroz caldo, sandwiches with butter, margarine, and mayonnaise, and processed food such as meat, fish, hotdogs, sausage, burger patties, chicken nuggets, tocino, tapa, etc.

The red category includes foods and drinks not recommended on the canteen menu. These foods and drinks contain high amounts of saturated fats, sugar, and or salt. In the article of Malipot (2017), along with unhealthy food patterns, DepEd explained that

"unhealthy food patterns – more sugars, fats, and oils, and less leafy green vegetable and whole-grain cereals –and a sedentary lifestyle, led to an upward surge in overweight and obesity."

Moreover, since schools "are recognized as good venues for health promotion strategies," DepEd has directed all public schools to implement strategies that would help promote healthy eating habits.

Furthermore, food intake options should also include those that "increases consumption of fruits and vegetables, legumes, whole grains, and nuts," "limits the intake of free sugars" and "limits salt (sodium) consumption from all sources," the DepEd said.

From the theories and studies mentioned above, the study made it into its final form. This study may upgrade and improve the competencies and services of school canteens to assure a healthy means of food services that can significantly affect how students choose food, thereby developing good healthy eating habits linked to their health status – one of the most significant domains in the quality of life of the learners.

## **1.1. Objectives of the Study**

This study aimed to determine the management and operations of school canteens' as a basis for an enhanced canteen development plan for the school year 2019-2020. Specifically, it aimed to describe the canteen managers' personal and professional profile; determine the level of implementation of canteen management and operations of school canteens; the influence of the profile of the canteen managers on how they manage school canteens, and to propose a school canteen developmental plan.

## **1.2. Theoretical Framework**

This study is anchored on Jean Piaget's theory which explains that children's or students' cognitive development is crucial for their understanding of and learning about the world around them. Piaget's theory can be a helpful guide in nutrition education. This theory helps to design effective nutrition education appropriate for the development stages of childhood. Therefore, the

purpose of this theory is to describe how Piaget's theory is used in the development of nutritional habits of students and will make an attempt to provide a viewpoint for those who provide nutritional education. One of the nutritional habits of students was the kind of food they intake, especially when they are in their own home and school.

In school, students buy the food that they eat, especially in their school canteen. The school canteen must have excellent management practices. It says that if they have good management and marketing services, canteens can provide the best foods for students, they can provide healthy, delicious, and affordable foods that can satisfy their buyers for them to provide nutritious and affordable foods for their students.

According to Galabo (2019), the establishment and operation of the school canteen are essential in developing love and interest in buying nutritious foods among students, faculty, and school personnel, providing a variety of foods to enhance knowledge and skills. Moreover, the looks or presentation of the canteen must be appetizing and appealing. A fun and effective way to draw attention to main food items is to tuck a novelty item in with a display to attract students' attention.

Galvez (2018) mentioned that DepEd wants the canteen in public schools healthy in the food they offer and their finances. Operational practices must be geared to the welfare of the student, teacher, and the whole school. In the study of Galabo (2019), he emphasized the strong commitment of DepEd to support the student health and well-being that includes food and nutrition education. Thus, the establishment and operation of school canteens are significant in developing love and interest in buying nutritious and healthy food among clients in school, making it possible for them to enjoy nutritious and healthy foods.

In the study of Drummond and Sheppard (2011), School services sit within that system and should be an integral part of the school environment. It must be health-oriented and an ideal site upon which to focus efforts on improving the nutrition of students. Galamgam (2018) emphasized that strict compliance to the

requirements on operation and management of school canteens, the safety of the customers is the priority, also training for food handlers, good health and good hygiene is a must.

## **2. Methodology**

### **2.1. Research Design**

This study utilized the descriptive-correlational method of research. Specifically, it gathered data on the management and operation of school canteens; as a basis for an enhanced canteen development plan.

### **2.2. Subjects of the Study**

The respondents were 21 canteen managers from different schools in Ilocos Sur.

### **2.3. Data Gathering Tools**

It made use of a questionnaire-checklist validated by experts. Part I gathered data on the profile of the canteen managers. Part II elicited information on the management of the school canteens, especially on planning, services delivered, and physical facilities of the school canteen. Part III gathered data on the operations of school canteens on social food services, food safety standards application, accounting system, location, and layout and cost. Observations and informal inquiries were made to validate the data.

### **2.4. Ethical Considerations**

The researchers found that the study's findings were valid and trustworthy; the ethical principles/considerations were observed. They are as follows: a) honesty in all scientific communications; b) objectivity to avoid bias in the research methods; respect for intellectual property by honoring patents and copyrights; and c) confidentiality to protect communications and personal information to ensure the privacy of data. The identity of the respondents will not be exhibited. Moreover, the researcher did not

violate the respondents' confidentiality nor create false data to meet the desired objective. Furthermore, the researchers interpreted data without a biased perspective and did not omit sections on data analysis and conclusions.

## 2.5. Data Gathering Procedure

The researchers asked permission from the Schools Division Office of Vigan City, and Candon City, Ilocos Sur. A letter was forwarded to the different principals of the said divisions, requesting permission to gather data. The researchers personally distributed and retrieved the questionnaires and saw that the situation was favorable and under control against pressure.

## 2.6. Data Analysis

The statistical tools used were frequency and percentage, mean and multiple regression analysis. Frequency and percentage determined the profile of the canteen managers. Mean described the level of implementation on canteen management. Multiple regression analysis determined the personal and professional factors that significantly influenced the management and operations of the school canteen.

# 3. Results and Discussion

## 3.1. Profile of the Canteen Managers

A great number of canteen manager respondents are between ages 24-26 years old, female, married, has been teaching for 1-3 years, and college degree holders with master's units. They have attended 6-10 training programs at the division, regional, national, and international levels and have been canteen managers for 0-4 years and received 0-4 canteen awards.

## 3.2 Level of Implementation on Canteen Management

The overall mean rating on the level of school canteen management is 3.97, described as "High." This implies a well-implemented service on the canteen management. Students as per observation and on their answers during informal interviews

**Table 1.** Level of Implementation on Canteen Management

Canteen Management	Mean	Level
a. Planning	4.03	High
b. Service Delivery	4.25	Very High
c. Physical Facilities	3.63	High
Overall	3.97	High
<u>Norm</u>	<u>Level</u>	
4.12- 5.00	Very High	
3.41- 4.20	High	
2.60- 3.40	Fair	
1.81- 2.60	Low	
1.0- 1.80	Very Low	

emphasized that they would like to have a good dining experience where canteen staff satisfies not only their nutritional needs but also their feelings in which a good ambiance and friendly servers can cater them during breaks.

Service delivery has the highest mean rating of 4.25, described as "Very Highly Implemented." This finding implies that to satisfy students' needs, canteen quality services must be thoroughly done such that it will affect the other variables that address the clients' needs. Canteen managers are prompt, courteous, and friendly always. They show respect and caters to the needs of learners. This observation supports the previous findings in the study of Galamgam (2018) that planning and service delivery must strictly comply with the needs of canteen management and operations for the safety of the customers. Based on observation, the service delivery of goods in canteens satisfies well the students because meals are served at the regular time. There are available and enough food served during recess in the morning, in the afternoon, and during lunchtime. They also observed that servers handle the food properly and there is the adequacy of dinner wares for use. They also observed proper grooming and professionalism.

Physical facilities have the lowest mean rating of 3.63 but still described as "Highly Implemented." This finding implies the satisfaction of clients on the implementation of physical facilities conducive for clients as it highly implements effective services for students. Thus, conducive environment, ventilation, and adequate

dining accommodation is an essential requirement for students, thus necessary to accommodate an ample number of students. As per observation, every school is doing their best to improve the physical facilities of their canteens. Also, the Department of Education was also doing its best by holding a contest on the best-managed canteen in the division; it recognizes the winner during the Kannawidan festival.

### 3.3. Level of Implementation of School Canteen Operations

The overall level of Canteen Operation Implementation is 4.15, described as "High." This rating implies that the school canteen operates in a "Highly Implemented" manner and that customers are satisfied with the services offered to them. The finding parallels the study of Galamgam (2018), where she mentioned that the components of canteen management were rated as "Effective" or "High" in the implementation. Although the components of canteen operations are somewhat different from the components of canteen management, both are significant in the purpose of giving quality service in the implementation of a healthy canteen for students. This result conforms with the study of Galabo (2019) that student satisfaction is based on the canteen ambiance, cleanliness, facilities, features, and prices. Findings on canteen service as perceived by students are moderately satisfactory, and students' satisfaction is moderate. Thus, the school canteen manager is encouraged to improve service quality.

Accounting System got the highest mean rating of 4.49, described as "Highly Implemented." This finding implies that there is proper documentation

on the book of accounts. In the study of Galamgam (2018), she emphasized that the foodservice industry must know how to manage and understand the accounting and record-keeping for technical controls. While Social Food Services got the lowest mean rating of 3.71, still described as "Highly Implemented." This implies that despite the effective preparation of meals and drinks in the canteen, still there are things to improve and take into considerations. In line with the study of Mendoza (2019), he emphasized that customers are the blood and life of the foodservice business, and to ensure continuous patronage, their satisfaction must be sustained. Furthermore, customers may be served with the best food in town and by the service standards. If greeting and worst with irritating gestures, then the dining experiences will be unpleasant if not traumatic to the customers.

Observations made show that canteen managers tried their very best to prepare nutritious meals and snacks for the students because there is a need for them to follow DepEd order #13 s 2017, otherwise known as the Policy and Guidelines on Healthy Food and Beverage Choices in Schools. Furthermore, as per observation, canteen managers maintain a logbook for their inventories. They record daily transactions to monitor their sales and list food products that are most liked by students. During an informal interview, they claimed that they need to record transactions for proper accounting and auditing procedures in the school.

### 3.4. Influence of Canteen Managers' Profile on School Canteen Management and Operations

**Canteen Management.** As seen in the results of multiple regression analysis ( $F=0.621$ ,  $p>.05$ ), there is no significant of the personal and professional attributes of the canteen managers on the level of management of the school canteens. The table also reveals that when variables were combined, they account for 38.3% of the variance ( $R^2=.383$ ). Accordingly, 61.7% of the variance could be attributed to the other factors not covered by the study. This finding means that when the canteen manager profile is either single or

**Table 2.** Level of Implementation of Canteen Operations

Canteen Operations	Mean	Level
a. Social Food Services	3.71	High
b. Food Safety Standard Application	4.22	Very High
c. Accounting System	4.49	Very High
d. Location and Layout	3.98	High
e. Costing	4.36	Very High
Overall	4.15	High

**Table 3.** Multiple Regression Analysis of Canteen Management on the Profile of Canteen Manager-Respondents

Variables	Beta	t-value	Sig
Age	.302	.375	p>0.05
Civil status	.044	.112	p>0.05
Years of teaching	-.649	-1.083	p>0.05
Educational attainment	.268	.541	p>0.05
International Training	-.130	-.207	p>0.05
National Training	-.152	-.144	p>0.05
Regional Training	-.243	-.323	p>0.05
Division Training	.314	.624	p>0.05
No. of Years as Canteen Manager	-.134	-.338	p>0.05
Awards	-.003	-.007	p>0.05
$R=0.619$ $R^2=0.383$ $F\text{-ratio}=0.621$ $F\text{-prob: } p>.05$			

together, they do not significantly influence the canteen management. Hence, regardless of the profile of the canteen manager respondents, it is still the rules, policies of the school canteen, or their values and resources that affect how they manage the school canteen. The result conforms to the study of Vitamog (2012) that there is no significant relationship between the profile of the teachers and the level of effectiveness of the school canteen management.

**Canteen Operations.** Taken as a whole, when variables were regressed together, they yielded no significant relationship between the level of canteen operations and the profile of canteen manager as  $R^2=0.472$  ( $F=0.894, >.05$ ). The table also reveals that when variables were combined, they account for 47.20% of the variance ( $R^2=0.472$ ). Accordingly, other factors not covered by the study may account for the 52.80% of the variance.

This finding suggests that when the canteen manager profile is either single or together, they do not significantly influence the canteen operation. Hence, regardless of the profile of the canteen manager respondent/s, it would be the rules and policies of the school canteen, or their values and resources affect the operations of the school canteen. The result conforms to the study of Vitamog (2012) that there is no significant relationship between the teachers' profile on the

**Table 4.** Multiple Regression Analysis on the Components of Canteen Operations to the Profile of the Canteen Manager- Respondents

Variables	Beta	t-value	Sig.
Age	.055	.074	p>0.05
Civil status	.192	.526	p>0.05
Years of teaching	-.693	-1.250	p>0.05
Educational attainment	.408	.889	p>0.05
International Training	-.439	-.754	p>0.05
National Training	-.342	-.349	p>0.05
Regional Training	.146	.211	p>0.05
Division Training	-.020	-.044	p>0.05
No. of Years as Canteen Manager	-.296	-.809	p>0.05
Awards	-.190	-.424	p>0.05
$R=.687$ $R^2=0.472$ $F\text{-ratio}=0.894$ $F\text{-prob: } p>0.05$			

level of effectiveness of the school canteen management.

Furthermore, in the study of Miguinto and Capunan (2019), it was emphasized that DepEd strongly supports the students' health and well-being, and this includes a school system that offers a practical example of good nutrition. Thus, the DepEd curriculum arranges initiatives that encourages and promotes healthy diet and well-being among students.

### 3.5. Canteen Developmental Plan to Enhance Canteen Management and Operations

The Five-Year Enhanced Canteen Development Program, titled "*Tamang Implementasyon a Pagpapatupad ng Pagkaing Masustansya Para Sa Bata, Para Sa Bayan, Paigtingin ang Hustong Impluwensya sa Pagpapatibay ng Kaugalian na Pangkalusugan sa Pagpili ng Sapat na Nutrisyong Hatid ng Kantina ng Paaralan*" is hereby proposed. This enhanced canteen development program aims to address the needs of teachers and learners on enhancing the Canteen Management and Operations as it influences students eating habits and health status.

The plan includes updating and improving the education of canteen managers by finishing a master's degree aligned to management and operations of the school canteen. Establishing linkages with different schools/universities

through scholarship grants or memoranda of agreement for exchange in best practices is also encouraged. Highlights of the plan also include: 1) Rendering health education campaign to students along with food preferences, dietary/nutritional food values, promotion of good health, marketing right food choices; 2) Equipping canteen managers and heads about proper management and operations of school canteen so as with healthy food preparation and choices; and 3) Empowering parents in influencing healthy food choices among their children. Inclusion of health and nutrition campaign in fostering personality development of students and improving the handwashing and safety facility of school canteens. Physical facilities are indispensable in canteen management and operations; hence, there is a need to improve these especially on its structure because this will invite students to patronize the school canteen. Canteens must also have functional drainage and well-maintained wash areas, so there is a need for a collaborative effort among local government units, school heads, parents, canteen managers, and students to achieve a better and safer canteen that will cater to good nutrition and quality services for the students.

#### 4. Conclusions and Recommendations

Canteen managers are dominated by females, married, and have been teaching for 1-3 years. The majority have master's degree units. Most attended 6-10 training programs and have been canteen managers for 0-4 years and received 0-4 canteen awards. There is a "High" status of canteen management and operations among canteen managers. However, the canteen managers' overall profile does not influence how the canteen is being managed and operated. There are still unhealthy observations along the type of food served in some schools which should be given attention to. The researchers thus formulated an enhanced canteen development plan to improve canteen management and operations as these influence the students' eating habits and health status. According to Kremers, Mensink, Schawinghammer, and Smeets (2012), the environment can exert a strong influence on

people's food decisions. To facilitate students to make more healthy food choices and to develop healthy eating habits, it is therefore crucial that the school food environment is healthy.

School administrators should encourage canteen managers to continue their master's degree and attend seminars and training programs aligned with the management and operations of the school canteen. Canteen managers must also monitor the preparation and planning of food services, especially on prohibiting the red category of foods in the school canteen. School administrators should keep improving physical facilities. Proper authorities should check and monitor the proper implementation of the DepEd order 13, s 2017 on "Policy Guidelines on Healthy Food and Beverage Choices in Schools and DepEd Offices."

The canteen managers should ensure that the green category food should be offered to the students frequently and that the red category food are avoided. Inclusion of healthy canteen management and operations, right food choices, snack preferences, eating habits, and their effects on health must be included in the health and nutrition-related subjects. The school administration should also create posters about the nutritional value of foods in the right amount and kind in strategic places in the school campus. To be prioritized as well are assigning more staff to help the canteen manager in bookkeeping and recording processes, and strengthening support from parents of the learners. An enhanced canteen developmental plan in every school must be updated and strictly monitored regularly by proper authorities.

#### REFERENCES

- Bactad, M., Cuaresma N., Mani L. (2017). Students on their food choices and factors affecting their food preferences on school canteen, Claret School Zamboanga City.
- Bandara, S. (2017). Service quality of school canteens: A case study from the Western Province, Sri Lanka. *Ceylon Journal of Medical Science*. [www.researchgate.net](http://www.researchgate.net).
- Banga, A., Pinca M., Unay, I., Sampaga, M., Dugan, M. (2017). Level of students' satisfaction in SMA canteen services. *St. Michael Academy, Northern Samar*.



- Bargiota A., Delizona, M. Tsitouras, A., Koukoulis, G. (2013). Eating Habits and Factors Affecting Food Choice of Adolescents Living in Rural Areas. Homeostasis, Hormones, International Journal of Endocrinology, and Metabolism. <http://www.hormones.gr/8409/article/eating-habits-and-factors-affecting-food%E2%80%A6.html>.
- Birgit R., Novak P., Jurgen B., Hagel, E., Wanek, V. (2000). Eating Habits, Health Status, and Concerns about Health. Elsevier Publishing. <https://www.sciencedirect.com/science/article/abs/pii/S0091743500906479>.
- Brown, Linda Keller, and Mussell, Kay, eds. (2015). Ethnic and Regional Foodways in the United States: The Performance of Group Identity. Knoxville: University of Tennessee Press.
- Cvjetan, Branko (2014). The Social Environment of Schools and Adolescent Nutrition: Asso. Between Schools Nutrition Climate & Adolescents Eating Behavior & BMI. Journal of School Health. New Zealand.
- Department of Education Order 8 s. 2007, "Revised Implementing Guidelines on the Operation and Management of School Canteens in Public Elementary and Secondary Schools.
- Dep Ed Order 13 s 2017, "Policy and Guidelines on Healthy Food and Beverages in Schools and Dep Ed Offices.
- DO 14, s 2005, "Instruction to Ensure Consumption of Nutritious and Safe Food Schools".
- Drummond, Claire & Sheppard, Lorraine (2011). Examining Primary and Secondary School Canteens and their Place within the School System: A South Australian Study. Retrieved from <https://academic.oup.com/her/article/26/4/739/751449>.
- Dumlao, Maria Ericka, (2014). Factors Influencing Food Preferences of Students; Perspective in Developing a Viable Canteen Management Program, La Consolation University Philippines.
- Galabo, Norman R. Ed D (2019). Canteen Service Quality and Student Satisfaction. Davao City. Retrieved from [https://www.researchgate.net/publication/332877544\\_CANTEEN\\_SERVICE\\_QUALITY\\_AND\\_STUDENT\\_SATISFACTION](https://www.researchgate.net/publication/332877544_CANTEEN_SERVICE_QUALITY_AND_STUDENT_SATISFACTION).
- Galamgam, Cherill B. (2018). Canteen Management of Secondary Schools in Cagayan, Division of Ilocos Sur. The University of Northern Philippines.
- Galvez, Marites (2018). School Canteen Operations and Management. Retrieved from <https://www.pressreader.com/philippines/sunstar-pampanga/20180804/281655370888656>.
- Gibson E., Kreichauf S., Wildgruber A., Vogele C., Summerbell C., Nixon C. More H. Douthwaite W., Manios Y., (2012). A narrative review of psychological and educational strategies applied to young children's eating behaviors aimed at reducing obesity risks. <https://pubmed.ncbi.nlm.nih.gov/22309067/>.
- Malipot, Merlina Hernando (2017). No Softdrinks, Candies in School Canteen-Dep Ed. Manila Bulletin. Retrieved from [www.news.mb.com.ph](http://www.news.mb.com.ph).
- Mensink F., Schwinghammer S., Smeets A. (2012). The Healthy School Canteen Programme: A promising Intervention to Make the School Food Environment Healthier. Journal of Environmental and Public Health. <https://www.hindawi.com/journals/jep/2012/415746/>.
- Miguinto, Trisha Jane & Capunan Mhel Unice (2019). Canteen Operation and Management Assessment. International Journal of Engineering, Science, and Computing.
- Quillopo, Donna Angelica S., (2018). Food Preference of the Junior High School Students in Ilocos Sur National High School. The University of Northern Philippines.
- Smith, M., Robinson L., Segal J. (2019). Binge Eating Disorder. <https://www.helpguide.org/articles/eating-disorders/binge-eating-disorder.htm>.
- Terry M., O'Malley P., Delva D., Johnston L., (2010). The School Food Environment and Student BMI and Food Consumption: 2004-2007. US National Library of Medicine, National Institute of Health Journal. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2739104/>.