

Nutritional Quality and Menu Compliance of a Nutrition Improvement Plan for School Canteens

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Abstract: School canteens play an important role in shaping students' eating habits and overall health. However, despite existing nutrition guidelines, many canteens still offer food that may not meet recommended nutritional standards. This study aimed to assess the nutritional quality and menu compliance of a nutrition improvement plan implemented in a school canteen.

Specifically, the study evaluated the nutritional content of food items in terms of energy, macronutrients, and micronutrients. It also determined the level of compliance of the canteen with the prescribed guidelines, particularly in terms of approved food items, portion sizes, and food preparation methods. In addition, the study compared the actual nutritional content of the food served with recommended standards and identified the challenges encountered in implementing the nutrition improvement plan.

Using a descriptive-evaluative research design, data were collected through menu analysis, nutrient computation, and compliance assessment. The findings revealed gaps between the nutritional quality of food offered and the recommended standards, as well as varying levels of compliance with the guidelines. Several challenges, including cost, food preferences, and operational limitations, were also identified.

The results of this study may serve as a basis for improving school canteen practices and strengthening nutrition programs to promote healthier food choices among students.

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I. INTRODUCTION

Good nutrition is one of the most important foundations of a child's growth, learning, and overall well-being. What students eat every day does not only affect their physical health but also their ability to concentrate, participate in class, and perform academically. Because students spend a significant part of their day in school, the food available in school canteens plays a major role in shaping their eating habits.

Ideally, school canteens should provide food that is not only affordable and accessible but also nutritious and balanced. In response to growing concerns about malnutrition and unhealthy eating habits among students, schools have introduced nutrition improvement plans and guidelines. These policies are designed to ensure that food served in canteens

meets proper nutritional standards, including appropriate portions, healthy preparation methods, and the inclusion of nutrient-rich food choices.

However, in reality, not all school canteens are able to fully follow these guidelines. Many still offer foods that are high in sugar, fat, and calories but low in essential nutrients. This situation can be influenced by several factors such as budget limitations, availability of ingredients, students' food preferences, and lack of proper monitoring. As a result, there is a need to examine whether these nutrition improvement plans are truly being followed and whether they are effective in improving the quality of food served.

Assessing the nutritional quality of canteen food is important to determine if students are receiving the nutrients

they need. At the same time, evaluating menu compliance helps identify whether canteen operators are following the prescribed standards. Comparing the actual food served with recommended nutritional guidelines can provide a clearer picture of any gaps or inconsistencies.

Moreover, understanding the background of the respondents, such as their age, role, and experience, can help explain differences in how the nutrition plan is implemented. Identifying the challenges faced by canteen staff is also important in finding practical ways to improve the system.

With these concerns, this study aims to assess the nutritional quality of food offered in a school canteen, determine the level of compliance with a nutrition improvement plan, compare the nutritional content with recommended standards, and identify the challenges affecting its implementation. Ultimately, the study seeks to contribute to the improvement of school canteen practices and support the promotion of healthier eating habits among students.

II. LITERATURE REVIEW

➤ *Profile of Respondents and Its Relevance to Nutrition Programs*

The profile of respondents such as age, sex, position, and socio-demographic characteristics plays a significant role in the implementation of school nutrition programs. According to the World Health Organization, demographic factors influence food choices, nutritional awareness, and compliance with dietary guidelines (World Health Organization, 2020).

Studies show that canteen managers and staff with proper training and relevant experience are more likely to implement healthy menu standards effectively (Story et al., 2006). Likewise, socio-demographic characteristics may affect attitudes toward nutrition policies and the ability to follow prescribed guidelines (Jaime & Lock, 2009).

➤ *Nutritional Quality of School Canteen Food*

Nutritional quality refers to how well food meets dietary requirements in terms of energy, macronutrients, and micronutrients. The Food and Agriculture Organization emphasizes that balanced meals must include appropriate amounts of carbohydrates, proteins, fats, vitamins, and minerals to support growth and development (FAO, 2019).

Research indicates that many school canteens offer foods high in calories, sugar, and fat but low in essential nutrients. The Centers for Disease Control and Prevention reported that improving food offerings—such as adding fruits, vegetables, and whole grains—enhances students' dietary intake (CDC, 2021).

In the Philippine setting, guidelines from the Department of Education and the Department of Health stress the importance of nutrient-dense foods in school canteens to combat malnutrition and obesity (DepEd, 2017; DOH, 2012).

➤ *Menu Compliance with Nutrition Improvement Plans*

Menu compliance refers to the degree to which school canteens adhere to prescribed nutrition guidelines, including approved food items, portion sizes, and preparation methods. The Department of Education has implemented policies promoting healthy food choices in schools (DepEd, 2017).

However, studies reveal that compliance is often inconsistent due to limited monitoring, financial constraints, and vendor preferences (Jaime & Lock, 2009). The World Health Organization highlights that policy effectiveness depends on proper enforcement, monitoring systems, and stakeholder engagement (World Health Organization, 2016).

➤ *Comparison with Recommended Nutritional Standards*

Evaluating food served in school canteens against recommended nutritional standards is essential to determine adequacy. Nutritional standards are typically based on dietary reference intakes that specify required levels of energy and nutrients.

According to the Food and Agriculture Organization, comparing actual nutrient content with recommended values helps identify deficiencies or excesses in school meals (FAO, 2013). Studies show that many school canteen foods exceed recommended fat and sugar levels while lacking essential micronutrients (Evans et al., 2012).

This comparison is important in assessing whether nutrition improvement plans are effective in achieving their intended outcomes.

➤ *Challenges and Factors Affecting Implementation*

Several studies identify common challenges in implementing nutrition improvement plans in school canteens:

- Cost and profitability concerns – healthier foods may be more expensive
- Student preferences – demand for unhealthy foods affects menu offerings
- Supply limitations – lack of access to fresh and nutritious ingredients
- Lack of training – canteen staff may lack nutrition knowledge
- Weak monitoring systems – poor enforcement of policies

The Food and Agriculture Organization emphasizes that capacity building, continuous training, and strong policy support are necessary to overcome these barriers (FAO, 2019).

III. METHODOLOGY

This study used a descriptive-evaluative research design to assess the nutritional quality and menu compliance of a nutrition improvement plan in a school canteen. The design allowed the researcher to describe the current condition of food offerings and evaluate how well they meet established nutritional standards and guidelines.

IV. FINDINGS/RESULTS

The findings of the study revealed that most respondents were canteen staff with varying levels of experience, and many had limited formal training in nutrition. In terms of nutritional quality, the food items offered were generally high in calories and fats, moderate in carbohydrates, and low in essential micronutrients such as vitamins and minerals. The canteen demonstrated only partial compliance with the nutrition improvement plan, as some approved food items were followed, but portion sizes were inconsistent and unhealthy preparation methods, such as frying, were still commonly practiced. When compared to recommended nutritional standards, the results showed an excess in sugar and fat and a deficiency in micronutrients. Several challenges were also identified, including limited budget for healthy ingredients, students' preference for unhealthy foods, lack of staff training, and weak monitoring and supervision.

V. DISCUSSION

The findings suggest that while efforts are being made to improve school nutrition, full compliance with the nutrition improvement plan has not yet been achieved. The nutritional quality of food remains a concern, particularly due to high fat and sugar content.

The partial compliance observed may be linked to practical challenges such as cost constraints and student demand. This supports previous studies which indicate that economic and behavioral factors significantly influence food choices in school canteens.

The lack of micronutrients in food offerings highlights the need for better menu planning and stronger adherence to dietary guidelines. Furthermore, limited training among canteen personnel suggests a need for capacity-building programs.

Overall, the results indicate that policies alone are not enough; proper implementation, monitoring, and support systems are essential.

VI. CONCLUSION

The findings of the study led to the conclusion that the nutritional quality of food offered in the school canteen does not fully meet the recommended standards. It was also found that menu compliance with the nutrition improvement plan is

only partial, indicating inconsistencies in following prescribed guidelines. Furthermore, there exists a significant gap between the actual food offerings and the established nutritional standards. The study also identified several challenges that affect the effective implementation of the nutrition improvement plan, including limited resources, lack of training, and weak monitoring. Therefore, it is necessary to strengthen supervision, provide proper training for canteen staff, and promote healthier food choices among students to improve the overall effectiveness of the program.

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