

**UNIVERSITI TEKNOLOGI MARA (UiTM)  
PUNCAK ALAM CAMPUS**

**ASSESSING THE HEALTHFULNESS OF FOOD  
ENVIRONMENTS IN UNIVERSITI TEKNOLOGI MARA  
(UiTM) PUNCAK ALAM**

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## ABSTRACT

The university food environment plays a vital role in shaping students' dietary patterns and long-term health outcomes, especially during early adulthood—a critical period for forming lifelong habits. Despite growing concerns about unhealthy eating among Malaysian university students, few studies have thoroughly assessed the healthfulness of campus food settings. This study aimed to evaluate the food environment in Universiti Teknologi MARA (UiTM) Puncak Alam using the Nutrition Environment Measures Survey-Restaurant (NEMS-R) tool. A cross-sectional observation was conducted across 34 cafeterias in five main campus locations: Rafflesia, Angsana & Casuarina, Dahlia, Plaza Sentral B, and Pusat Kegiatan Pelajar. Cafeterias were scored based on NEMS-R criteria, which measure the availability of healthy options, presence of facilitators like nutrition labelling, and barriers such as portion sizes and pricing strategies. The findings showed that healthy options were severely limited, with only 29.4% of cafeterias offering fruits and 41.2% offering non-fried vegetables. No cafeterias provided whole grain bread, low-fat milk, or 100% fruit juice. Facilitators of healthy eating, such as reduced portion sizes, nutrition labelling, or online information, were nearly absent; only 17.6% highlighted healthy entrées on menus. Barriers to healthy eating were generally low, but 11.8% of cafeterias encouraged large portions. ANOVA results showed no statistically significant differences in overall NEMS-R scores across locations ( $p > 0.05$ ), suggesting a consistent lack of supportive food environments campus-wide. These findings underscore the urgent need for institutional policies, vendor engagement, and health promotion strategies to foster a food environment that aligns with national dietary guidelines and supports students' nutritional wellbeing.

**Keywords:** *Food environment, NEMS-R, healthy eating, university cafeterias, nutrition policy, UiTM Puncak Alam*

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# **CHAPTER 1: INTRODUCTION**

## **1.1 Research Background**

The university food environment played an important role in providing healthy foods to university students. Students needed to get healthy food to support their overall well-being and academic performance (López-Gil et al., 2022; Roslim et al., 2024). A study indicated that the types of food offered, their nutritional quality, and the overall dining environment were instrumental in shaping eating habits, which might either have promoted or hindered a healthy diet (Mah et al., 2019). As young adults, university students were at a critical stage of life where they established long-term eating habits that could significantly impact their future health. Access to a variety of nutritious and affordable food options was essential to promote balanced diets and prevent diet-related health issues such as obesity, diabetes, and heart disease (Cena & Calder, 2020).

However, research indicated that many university food environments were dominated by high-calorie, low-nutrient options, which might not have aligned with the nutritional needs of students. Cafeterias that primarily offered calorie-dense and low-nutrient foods contributed to “obesogenic environments,” which encouraged weight gain and poor dietary choices (Verde et al., 2024). Besides, another research on students’ food environments in university settings in other countries showed that students often selected foods that were convenient and affordable, which tended to be energy-dense and nutrient-poor (Mann et al., 2021). This was particularly concerning as unhealthy eating habits during university years could lead to problems such as adverse health outcomes and poor academic performance.