

UNIVERSITI TEKNOLOGI MARA (UiTM)

**ASSOCIATION OF ANTHROPOMETRY STATUS, DIETARY
INTAKE AND CHRONONUTRITION BEHAVIOR AMONG
ADULTS IN SELANGOR**

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ABSTRACT

Background: Nowadays, adults face the challenges of unhealthy lifestyles and suboptimal dietary decisions, increasing the likelihood of weight issues which influence their anthropometric status, meal skipping, and eating disorders. Despite these concerns, there is a lack of association between anthropometry status, dietary intake and chrononutrition behaviour among adults. **Objective:** This study aims to determine the anthropometry status among adults in Selangor, to determine the dietary intake (DI) among adults in Selangor, to determine the chrononutrition behaviour among adults in Selangor and to determine the association of anthropometry, dietary intake and chrononutrition behaviour between adults in Selangor. **Method:** This cross-sectional study recruited 347 participants of adults who live in Selangor, aged 18 to 65 years old. For anthropometric measurements, height, weight, BMI, body fat percentage, visceral fat, and skeletal muscle mass were measured. Participants' eating patterns were assessed using a three-day, 24-hour diet recall, and we also assessed their chrononutrition behaviours using a Chrononutrition Profile Questionnaire (CP-Q). All the data obtained were analyzed using Nutritionist Pro and SPSS ver.27. **Result:** The current findings show that the majority of the participants are obese. For the dietary report, the majority of them are analyzed as under-reported meanwhile only 36% are classified as normal reports. In the chrononutrition behaviours, the majority of the participants obtained good scores for eating window, breakfast skipping and night eating. However, fair scores are obtained for the evening latency and evening eating and poor scores for the largest meal. **Conclusion:** In summary, the study of the association of anthropometry status, dietary intake, and chrononutrition behaviour among adults in Selangor can yield valuable insights, promote healthier habits, and deepen our scientific understanding of the complex interplay between nutrition and well-being.

Keywords: adults, chrononutrition, dietary intake, anthropometric

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CHAPTER ONE - INTRODUCTION

1.1 Research Background

Obesity has emerged as a significant global health issue in the global arena, leading to the rapid growth of numerous chronic illnesses. This phenomenon is primarily influenced by various reasons, particularly a significant transition from regular diets to diets with a higher energy density. These diets place a larger emphasis on fat and added sugars in food while reducing fibre consumption. The prevalence of obesity has reached epidemic levels in numerous regions globally. Specifically, in 2018, 39% of people were classified as overweight, while 13% were categorized as obese (WHO, 2018). Apart from that, according to NHMS (2023), 54.4% of people in Malaysia are considered overweight and obese with BMI $>25.0\text{kg/m}^2$. Research by Chooi et al. (2019), has demonstrated a correlation between overweight and obesity and a range of consequences, including cardiovascular illnesses, diabetes mellitus, hypertension, and metabolic syndrome. Furthermore, these conditions have a detrimental impact on multiple dimensions of a person's quality of life (Chooi et al., 2019). The process of rural-urban transitions in developing nations has the potential to increase the risk factors and prevalence of these diseases (Ellahi et al., 2023). The findings of a study indicate that there is a larger prevalence of obesity and abdominal obesity in urban areas compared to rural areas (Nosratzahi et al., 2021).

Besides, the association between anthropometric, dietary intake, chrononutrition or circadian rhythm also plays a role in dietary intake (DI). The circadian clock system is an innate timing system present in some humans. Its purpose is to align the physiology and behaviour of humans with the 24-hour environmental cycles. Chrononutrition refers to the interaction between nutrition and the circadian rhythm. The two essential factors are dietary components that control the circadian system and meal times that align misaligned molecular clocks (Ahluwalia, 2022). Circadian rhythms in a healthy human have significant physiological roles, encompassing the 24-hour biological cycle as well as