

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT AND VALIDATION OF A KNOWLEDGE,
ATTITUDE, AND PRACTICE (KAP) QUESTIONNAIRE ON
ULTRA-PROCESSED FOODS AMONG ADULTS IN MALAYSIA**

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ABSTRACT

Background: The increasing consumption trend of ultra-processed foods (UPF) has been associated with poor dietary quality and increased risk of obesity, diabetes, and other non-communicable diseases. Despite this, there is a lack of validated tools to assess adults' knowledge, attitudes, and practices (KAP) regarding UPF consumption, particularly among the Malaysian population. **Objective:** Thus, this study will address this gap by developing and validating the Knowledge, Attitude, Practice Questionnaire of Ultra-processed foods (KAP-UPF) among Adults in Malaysia. **Methods:** A questionnaire was developed based on existing literature. The KAP-UPF consisted of 49 items. Content validity was evaluated by a panel of experts using Content Validity Index (CVI) and Content Validity Ratio (CVR), and face validity was assessed using the Face Validity Index (FVI) among a sample of target respondents. Then, reliability was examined using Cohen's Kappa for categorical items, Intra-Class Correlation (ICC) for continuous items, and Cronbach's Alpha for internal consistency. **Results:** Two items were deleted, and one item was added due to low CVR (<0.99) during content validity. Then, the KAP-UPF questionnaire demonstrated good face validity, with most items achieving acceptable I-FVI scores (>0.8). Cohen's Kappa showed moderate agreement for most items (>0.6), although some items in the practice domain had lower values. ICC values also indicated moderate to good test-retest reliability (>0.5) with Cronbach's Alpha values confirmed acceptable internal consistency within each domain (>0.7). **Conclusion:** The final draft of the questionnaire consisted of 48 items. The questionnaire is valid and reliable for evaluating UPF-related knowledge, attitudes, and practices among Malaysian adults.

Keywords: Knowledge, Attitude, Practice, Ultra-Processed Food

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Ultra-processed foods (UPF) are defined as formulations of ingredients mainly for industrial use, resulting from multiple industrial processes. These foods are typically high in sugar, oils, fats, and salt, and contain additives like colours, flavours, and emulsifiers to enhance taste. Other than that, ultra-processed foods often replace minimally processed foods and fresh meals, making them unhealthy (Monteiro et al., 2019). Globally, UPF consumption is rising, with the United States leading, followed by the UK and Canada, while Malaysia has the lowest consumption (Marino et al., 2021). However, a study in Malaysia, 31% of daily intake among public university students in Malaysia comes from UPF (Ganesrau et al., 2023), and 40.38% among adults in Terengganu, which indicates high consumption (Asma et al., 2019). This trend is linked with obesity and non-communicable diseases like cardiovascular disease and type 2 diabetes (Pagliai et al., 2020), which is also aligned with a study that showed a significant association between UPF consumption and BMI in Malaysian university students (Ganesrau et al., 2023).

Health behaviours greatly influence future health and well-being (Alzaben et al., 2024). Knowledge, attitude, and practice are associated with the health behaviour of the individual, which shows that knowledge and attitude are significant predictors of risky behaviours (Alves, 2023). Health knowledge and behavior are also significantly associated with health outcomes (Sørensen et al., 2012). Based on the KAP model, knowledge forms the basis for changing behaviour, while beliefs and attitudes are the key forces that drive that change (Fan et al., 2018). KAP questionnaires are commonly used to explore health-related behaviours and how individuals seek care for their health