

Trends in fruit and vegetable consumption among the Malaysian adults, 2006-2015

Kee Chee Cheong, Sumarni Mohd Ghazali, Tan Lay Kim, Nabilah Hanis Zainuddin¹, Nik Noor Syamimi Ismail, Lim Hui Li, Cheah Yong Kang, Mohd Azahadi Omar

Sector for Biostatistics & Data Repository, Office of NIH Manager, National Institutes of Health, Ministry of Health Malaysia; Biomedical Epidemiology Unit, Institute for Medical Research, Ministry of Health Malaysia; Clinical Research Centre, Hospital Sultan Ismail, Johor Bahru; School of Economics, Finance and Banking, College of Business, Universiti Utara Malaysia

ABSTRACT:

Background: Inadequate fruit and vegetable consumption is linked to cardiovascular diseases, type 2 diabetes, certain types of cancers, obesity and all-cause mortality. Although the Malaysian Dietary Guidelines recommended the consumption of at least two servings of fruit and three servings of vegetable daily in the adults, data from several National Health & Morbidity Survey among the Malaysian adults showed remarkable low prevalence of adequate fruit and vegetable consumption. Hence, we aimed to determine the trend in fruit and vegetable consumption among the Malaysian adults between 2006 and 2015. **Methods:** We analysed the data from four nationally representative, cross-sectional national surveys, namely the Malaysian Non-Communicable Disease Surveillance 2006 (MyNCDS-1), the National Health & Morbidity Survey [NHMS] 2011, the Malaysian Adult Nutrition Survey [MANS] 2014 and NHMS 2015 in this study. The prevalence of adequate fruit and vegetable consumption between 2006 and 2015, and by sociodemographic trends (i.e. age group, sex, ethnicity and household income groups) of the Malaysian adults was assessed. **Results:** We observed a significant downward trend in the prevalence of adequate fruit and vegetable consumption among the Malaysian adults between 2006 and 2015 with each successive survey (3.9%, 4.1%, 1.1% and 2.9%, respectively) ($P_{\text{trend}} < 0.001$). In all four surveys, the prevalence of adequate fruit and vegetable consumption increased significantly with household income and age. **Conclusion:** Our data showed decline trend in fruit and vegetable consumption among Malaysian adults over the 10 years period, suggesting the needs of continuous effort to strengthen the existing healthy eating campaigns. This will not only increase the public awareness about the importance of adequate fruit and vegetable consumption to maintain an optimal health, but also able to aid in the effort to reverse the observed decline trend.

KEYWORDS: Fruit and vegetable, trend, adults, Malaysia