

## **Pre-hypertension and it's associated factors among students in a pre-university college in Malaysia**

### **ABSTRACT**

Background: Pre-hypertension is defined as the blood pressure between 120/80 mmHg and/or 139/89mmHg. The prevalence of pre-hypertension is highest among age group of 18 to 29 years old. . It is associated with higher risk of cardiovascular diseases and often was undiagnosed. The aim of this study is to look at the prevalence and factors associated with pre-hypertension among pre-university students. Materials and Methods: A cross-sectional study was conducted in 2016 among students of a pre-university college in Malaysia. A stratified random sampling by gender was conducted, and a total of 761 students participated in this study with 179 male and 592 female participants. The Malay version of International Physical Activity Questionnaire, modified caffeine intake questionnaire and Pittsburgh Sleep Quality Index to measure physical activity, caffeine intake and sleep quality respectively. Blood pressures were measured twice using sphygmomanometer and the average readings were taken for further data analysis. Binary multiple logistic regression was done to look at factors of pre-hypertension. Result: The percentage of pre-hypertension was 34.2 % (95% CI [30.1, 38.3]. Factors associated with pre-hypertension in this study were male gender, those whose father had non-formal primary level of education, caffeine intake of more than 125 mg per day, those who were physically inactive, poor sleep quality and overweight or obese. Conclusion: The study noted of high percentage of pre-hypertension among respondents, thus early strategy aim at increased screening and early behavioural modification is necessary to reduce the burden of diseases of related morbidities.

**Keyword:** Malaysia; Pre-hypertension; Caffeine intake; Sleep quality; Physical activity