

A Preliminary Study on the Prevalence of Cardiovascular Disease Risk Factors in Selected Rural Communities in Samarahan and Kuching Division, Sarawak, Malaysia

CHEAH Whye Lian, LEE Ping Yein, KHATIJAH Yaman,
RASIDAH Abdul Wahab

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Department of Community Medicine and Public Health, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, Lot 77, Section 22 KTL D, Jalan Tun Ahmad Zaidi Adruce, 93150 Kuching, Sarawak, Malaysia

Abstract

Background: It is important to understand the prevalence of risk factors for cardiovascular disease, especially in a rural setting.

Methods: A cross-sectional study was carried out in 238 rural households located in the Kuching and Samarahan divisions of Sarawak among individuals aged 16 years and above. Anthropometric measurements, blood levels of glucose and cholesterol, and blood pressure were collected.

Results: Prevalence of blood pressure in the hypertensive range was 43.1%. The highest rates of blood pressure in the hypertensive range were found in individuals aged above 60 years (38.6%) and 50–59 years old (31.8%). Age was one factor found to be significantly associated with blood pressure in the hypertensive range ($P < 0.001$). Prevalence of obesity was 49.0%. The highest prevalence of obesity was found among those aged 40–49 years (41.9%) and 50–59 years (29.9%). Gender was significantly associated with obesity ($P = 0.004$). The prevalence of blood cholesterol at risk was 21.6%, and the highest rate was found in the 40–49 years age group (34.0%). Fifty percent of respondents were found to have hyperglycaemia, with the highest prevalence in the 50–59 years age group (37.5%). A significant association was found between obesity, blood pressure in the hypertensive range and blood glucose level. When compared with non-obese individuals, those who were obese were more likely to have blood pressure in the hypertensive range and hyperglycaemia.

Conclusion: The risk of developing lifestyle-related diseases is no longer based on geographical or socio-economic factors.

Keywords: blood pressure, cardiovascular diseases, hypercholesterolaemia, hyperglycaemia, medical screening and epidemiology, risk factors, rural communities

Introduction

Mortality rates from coronary vascular disease, stroke, cancer, and diabetes are currently increasing in most industrialised countries, and they account for almost 5.5 million deaths annually in developed regions (1). In Malaysia, as in many other developing and developed countries, the major causes of morbidity and mortality have shifted from communicable to non-communicable diseases. Two of the leading causes of death in Malaysia in 2005 were heart disease and cerebrovascular disease (2). The Malaysian Ministry of Health's annual report (3) indicates that mortality from heart and pulmonary diseases accounted for 10.31% of all deaths. These 2 diseases were also classified among the top 10 causes of hospitalisation in government hospitals. It is well

known that these non-communicable diseases can often be prevented through lifestyle changes, particularly modification of risk factors such as obesity, hypertension, hypercholesterolaemia, and hyperglycaemia.

Low-income communities are always associated with poverty-related diseases (4). Fundamental changes in food supply patterns in recent decades have led not only to the increase in the amount of food available, but also to the changes in diet composition.

The implementation of public interventions that encourage a healthy lifestyle may need to be reviewed to determine whether the delivery should be targeted to the entire population or catered specifically to affected groups. This is particularly relevant where data on the cardiovascular disease (CVD) risk factors in the rural community are