

ORIGINAL ARTICLE

PHYSICAL ACTIVITY AND CARDIOVASCULAR RISK FACTORS AMONG MALAYS IN SELECTED RURAL AND URBAN COMMUNITIES IN SARAWAK

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ABSTRACT

The objective of this study was to describe the differences in physical activity with socio-demographic factors and its association with cardiovascular risk factors. It was a cross-sectional study among selected urban and rural Malays communities in Kuching and Samarahan. Physical activity data was obtained using International Physical Activity Questionnaire (IPAQ) short version. Assessment of cardiovascular risk factors was based on blood pressure, fasting cholesterol and glucose and body mass index (BMI). Data was analysed using SPSS version 20. A total of 223 participated with higher response from rural areas (60.1%) and females (61.9%). More than half of the respondents (58.5%) were overweight and obese, with a mean BMI of 25.9 kg/m² (SD=4.9). About 25% of the respondents were found to have blood pressure in the at-risk range. The prevalence of at-risk blood glucose was 52.3% with a mean value of 7.3mmol/L (SD=3.46). The prevalence of at-risk cholesterol were lower with 31.8%, mean value of 3.5 mmol/L (SD=2.94). There were more active respondents living in rural area ($p=0.02$). Logistics regression analysis showed that urban area (OR=1.988 95% CI 1.082 to 3.652), systolic blood pressure (OR1.020 95% CI 1.003 to 1.037) and blood cholesterol (OR0.884 95% CI 0.785 to 0.996) were associated with physical activity level. Change of physical activity due to urbanization can increase the risk of obesity and other chronic diseases. Efforts to include physical activity in intervention programme should be more intensified, with more provision of suitable built environment.

Keywords: physical activity, cardiovascular risk factors, urban & rural

INTRODUCTION

As speculated 10 years ago, Malaysia will be facing high rate of cardiovascular disease and diabetes as a consequence of the high prevalence of overweight and obesity¹. Today as evidenced by some of the recent studies^{2,3}, this phenomena is affecting the Malaysian population. A national survey done by Rampal et al.⁴ reported the overall prevalence of the metabolic syndrome was 27.5%, with a prevalence of central obesity, raised triglycerides, low high density lipoprotein cholesterol, raised blood pressure and raised fasting glucose of 36.9%, 29.3%, 37.2%, 38.0% and 29.1%, respectively. Studies showed that among the races in Peninsular Malaysia, Malay was one of the ethnic groups that was affected by cardiovascular risk factors^{5,6}. In Sarawak, a study done by Cheah et al among the selected Malay communities reported that the prevalence of hypertension at risk was 43.1%, obesity 49%, blood cholesterol at risk 21.6%, and hyperglycaemia 5%⁷.

One of the possible contributing cardiovascular factors is physical inactivity and it has been identified as the fourth leading risk factors for 6% of global mortality⁸. Physical inactivity is a modifiable risk factor for cardiovascular disease⁹. Physical inactivity is estimated to be the main cause for approximately 27% of diabetes, 30% of ischaemic heart disease and 21-25% of breast and colon cancers burden⁸. Regular physical

activities had been found to be crucial for the health and well-being of adults and to prevent chronic diseases¹⁰. In addition, it also brings psychological benefits by reducing stress and depression. The current WHO's recommendation for physical activity for the adults (18 - 64 years) 150 minutes of moderate-intensity aerobic physical activity throughout the week, or at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity¹¹.

Although regular physical activities are beneficial, only three out of five respondents in America were physically inactive in 2004¹¹ while in Malaysia only about 36 percent of adults reported to have exercise². A study in Malaysia² found that the respondents (n = 6926) spent the majority of their time (74% of the day) in sedentary activities, such as sleeping or lying down; doing light intensity activities (15% of the day), and doing moderate to vigorous intensity activities (10% of the day). Despite knowing the benefits of exercise, motivating sedentary adults to be physically active is a difficult task¹. The primary objective of this study was to describe the differences in physical activity with socio-demographic factors. It also investigated the association between level of physical activity and cardiovascular risk factors.