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Factors associated with physical inactivity among female and male rural adolescents in Borneo – a cross-sectional study

Abstract: Rural communities have shown marked increase in metabolic syndrome among young people, with physical inactivity as one of the main contributing factors. This study aimed to determine factors associated with physical inactivity among male and female rural adolescents in a sample of schools in Malaysia. A cross-sectional study was conducted among 145 students aged 13–15 years. Data on socio-demographic, health-related, and psychosocial factors (perceived barriers, self-efficacy, social influences) were collected using a self-administered questionnaire. Anthropometric measurement was taken to generate body mass index (BMI)-for-age, while physical activity (PA) level was assessed using pedometers. The mean steps per day was 6251.37 (SD=3085.31) with males reported as being more active. About 27% of the respondents were either overweight or obese, with more females in this group. There was no significant difference in steps among males and females (p=0.212), and nutritional status (BMI-for-age) (p=0.439). Females consistently scored higher in most items under perceived barriers, but had significantly lower scores in self-efficacy's items. Males were more influenced by peers in terms of PA (p<0.001) and were more satisfied with their body parts (p=0.047). A significantly higher body size discrepancy score was found among females (p=0.034, CI −0.639, −0.026). PA level was low and almost one-third of the respondents were overweight and obese. Female students faced more barriers and had lower self-efficacy with regards PA. Based on the findings, it is recommended that interventions focus on reducing barriers while increasing support for PA. This is particularly important in improving the health status of the youth, especially among the females.

Keywords: perceived barriers; physical activity; self-efficacy.

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Introduction

A population study done in Malaysia in 2004 reported that the prevalence of metabolic syndrome among younger age groups was higher among Indigenous Sarawakians compared with other ethnic groups (1). Individuals with metabolic syndrome had higher risk of developing cardiovascular disease (2). With the increasing socio-economic affluences, this phenomenon affects not only the adults but also adolescents. One of the contributing factors that increase metabolic syndrome is lack of physical activity (PA).

There are many health benefits of physical activities in adolescents. Adolescents need it to help build healthy bones and muscles (3). PA also has protective effects for adolescents against obesity and other chronic diseases such as diabetes, cardiovascular disease, and colon cancer during adulthood as well as promotes psychological well-being (3). Other studies found that PA helped improve students' academic performance (4). Despite its benefits, many studies showed a marked decline in PA during adolescence (5, 6). A recent study carried out among adolescents in Kuantan, Malaysia indicated that only 3% of the adolescents were at the high PA level, while the rest of the respondents were inactive (7). Findings from the Malaysia National Health and Morbidity Survey III revealed that 43.7% of the Malaysian adults were physically inactive (8).

There are many factors associated with physical inactivity in adolescents. Biological, socio-demographic, health-related factors and psycho-social factors were