The Relationship between Media Use and Body Mass Index among Secondary Students in Kuching South City, Sarawak, Malaysia

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Abstract

Background: Overweight and obesity rates among adolescents have increased substantially over the years. This study aimed to determine the body mass index (BMI) of students and parents and the relationship among media use, BMI, socio-demographic profiles, and snacking behaviour during television watching of secondary school students in Kuching South City.

Methods: In accordance with the two-stage sampling method, a total of 316 adolescents aged 13–17 years from 7 secondary schools participated. Data were collected using questionnaire and anthropometric measurement. Independent t test, one-way ANOVA, Mann–Whitney U test, and chi-square test were performed.

Results: The mean BMI was 20.56 kg/m² (SD 4.33) for boys and 20.15 kg/m² (SD 3.91) for girls. No significant difference in terms of z score for BMI-for-age or socio-demographic factors was found. The mean duration of time devoted to media use was 4.69 hours (SD 2.93) on weekdays and 5.69 hours (SD 2.87) on weekends. Boys were found to spend more hours on media use than did the girls (t = 4.293, P < 0.01). Respondents were reported to consume more cereal compared with soft drinks and junk foods. Respondents whose fathers worked in the private sector devoted the fewest hours to media use, whereas those with self-employed fathers devoted the most time to media use. Respondents with mothers who were employed spent more time on media use than did respondents whose mothers were housewives (F = 4.067, P < 0.01). No significant difference was found between BMI and media time or snacking habits.

Conclusion: This finding indicated that media time has no effect on body weight, because respondents were found to have normal weight and to consume less unhealthy food.

Keywords: body mass index, behaviour, adolescent, public health, urban population

Introduction

Obesity affects adults, adolescents, and children (1,2). The World Health Organization (WHO) has indicated that at least 1.6 billion adults (age 15 years and above) are overweight (2). Globally, 400 million adults were obese and 20 million children under the age of 5 years were overweight in 2008. Around the world, children are increasingly vulnerable to overweight and obesity (3). The International Obesity Task Force estimated that, in 2002, a total of 155 million school-age children (5–17 years) worldwide were overweight or obese. Approximately 30–45 million within that figure were classified as obese, which accounts for 2% to 3% of the world's children in this age group (3).