

ABSTRACT

Objective:

We investigated the prevalence of adolescents' overweight and obesity in Honiara city, Solomon Islands. In addition, we investigated the association between students' socio-demographic factors or lifestyle factors and overweight/obesity.

Method:

We implemented a cross-sectional study to estimate the prevalence of overweight and obesity of adolescents in two secondary schools in Honiara city. One school was a private school that implemented physical education classes, and the other was a public school that did not.

We adopted an inventory survey, enrolling all the 13-17-year-old students in Form 1-4 in the schools. Anthropometry measurement of weight, height, and waist circumference and the anonymous questionnaire was implemented. The questionnaire was on socio-demographic information and lifestyle information. For analysis of the nutritional status, we calculated BMI z-score and waist-to-height-ratio (WHtR), which indicated central obesity.

To identify the association between overweight/obesity and the other factors, categorical variables were analyzed by Fisher's exact test, and continuous variables were analyzed by t-test. Bivariate logistic regression analysis was used to obtain the odds ratio of overweight/obesity and WHtR separately for each explanatory variable. For the final model, multivariable regression analysis was used to identify the factors associated with overweight or obesity. SPSS was used for statistical analysis, setting $p < 0.05$ with a confidence interval of 95% as the level of significance.

Results:

A total of 290 students were included in the analysis. 98 students (33.8%) were males, 192 students (66.2%) were females. While 151 students (52.1%) were from the private school, 139 students (47.9%) were from the public school.

Among all, 211 students (72.8%) were "Non-overweight/obesity" (BMI Z-score $\leq +1SD$), and 79 students (27.2%) were "Overweight/obesity" ($+1SD < \text{BMI Z-score}$). We found that 53 students (18.5%) had high WHtR and 233 students (81.5%) had low WHtR.

In multiple logistic regression, gender, the number of people at home, and fruit intake during the past 30 days showed associations with high WHtR. Girls were more likely to have high WHtR than boys (OR=2.267, 95% CI: 1.097 - 4.683).

Conclusion:

We found that the prevalence of overweight and obesity were 20.3% and 6.9%, respectively. There were 53 students (18.5%) who had high WHtR. To investigate the changes in the prevalence over time and gap between urban and rural, we need further research on a national level.

Gender, the number of people at home, and fruit intake had a significant association with WHtR. Especially in order to prevent NCDs for a lifetime and to prevent obesity in next-generation, promoting overweight/obesity prevention for girls is highly essential. (410 words)