

ORIGINAL ARTICLE

Determinants of overweight and obesity in Thai adolescent girls

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ABSTRACT

Background

Obesity during childhood and adolescence is a serious public health problem as it increases the risk of chronic diseases throughout life. Obesity has recently been recognized as a public health threat within low and middle income nations such that research from Thailand has documented an increase in obesity in the past 10 years. While there are several descriptive studies reporting the presence of obesity among adults and children, few have examined relationships between social and dietary factors and obesity in this country. Thus the objective of this study is to examine predictors of overweight/obesity among Thai adolescent girls.

Methods

This cross-sectional exploratory study uses logistic regression to examine predictors of overweight/obesity among Thai adolescent girls. Anthropometric, dietary, economic, demographic, and activity data were collected from 342 adolescent girls ages 9 to 18 years living in suburban Bangkok, Thailand in 2004 and in 2005.

Results

The most important predictors of overweight/obese girls included early menarche ($p < 0.01$), birth order ($p < 0.01$), sports after school ($p < 0.05$), and moderate consumption of potato chips ($P < 0.05$). For instance, girls who were at most 10 years old at menarche were 4.24 (95% CI=1.42, 12.72) times more likely to be overweight/obese than girls who were 12 years old.

Conclusions

The predictive nature of early menarche has been well documented in studies around the world. However, the other major predictors may be specific to this population in Thailand, and thus may assist in better understanding social determinants of obesity.

Keywords: Obesity, Overweight, Thailand, Adolescents

INTRODUCTION

As undernutrition continues to be a problem in low and middle income countries, a new problem of over-nutrition has been documented in many parts of the world. Also referred to as the "nutrition transition", this epidemiological trend is defined as changes in the nutritional status and dietary intake among populations that are caused by economic, environmental, demographic, and cultural shifts.¹

While the nutrition transition was first recognized in South America, it has also been documented in Southeast Asia, and more specifically in Thailand. Most researchers have attributed this to the improved economic and demographic trends over the last three decades in Thailand.² Litimaskul reported a rise in the prevalence of adult obesity in Thailand to increase from 5% in 1986 to 17.9% in 1999.³ Researchers have also reported greater intakes in fat, animal proteins, and processed foods, contributing to increased caloric consumption, thereby increasing the risk for overweight and obesity.⁴ Langendijk et al. found the prevalence of obesity among Thai children to be 10.8% in the Northeastern region.⁵ They also found obesity to be greater among boys when compared to girls. Further, Sakamoto et al. found a high prevalence of obesity among pre-school children in the Central Region of Thailand and showed a marked correlation between socio-economic status and obesity in children, such that there was greater obesity among wealthier and better-educated parents.⁶

While several studies have reported the nutritional state of children and adults in Thailand, very few studies have specifically examined adolescent girls living in this country. Most recently, Pawloski et al. published a descriptive study showing a greater prevalence of obesity among primary school girls compared to secondary school girls.⁷ This finding suggests younger adolescents may be more greatly affected by obesity than their older counterparts. This trend was thought to be influenced by the nutritional transition occurring in Thailand and it is possible that younger adolescents are more likely to be influenced by a Western diet. This study further examines the data collected by Pawloski et al. by exploring determinants of overweight and obesity among Thai adolescent girls.⁷ Thus

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