

OVERWEIGHT AND OBESITY AMONG PRIMARY SCHOOLCHILDREN IN NAKHON PATHOM, THAILAND: COMPARISON OF THAI, INTERNATIONAL OBESITY TASK FORCE AND WHO GROWTH REFERENCES

Seo Ah Hong^{1,2}, Chawewan Sriburapapirom¹, Kriengsak Thamma-aphiphol¹, Chutima Jalayondeja³ and Sariyamon Tiraphat¹

¹ASEAN Institute for Health Development, Mahidol University, Nakhon Pathom, Thailand; ²Institute for Health and Society, Hanyang University, Seoul, Republic of Korea; ³Faculty of Physical Therapy, Mahidol University, Nakhon Pathom, Thailand

Abstract. Differences in estimation of over-nutrition due to use of different classification methods lead to difficulty in comparison. This study determined prevalence of overweight and/or obesity using different criteria and their relationship to socio-demographic determinants. A total of 605 schoolchildren (Grades 4-6) in Nakhon Pathom, Thailand were assessed for overweight and/or obesity based on Thai Growth Reference (TGR), WHO Growth Reference (2006) and International Obesity Task Force (IOTF) (2012). Prevalence of combined overweight and obesity ranged from 23.1% using TGR to 37.2% using WHO Growth Reference. Prevalence of obesity showed better concordance among the three methods, ranging from 11.5% using IOTF to 17% using WHO Growth Reference and TGR. All methods showed good agreement, with the highest being between TGR and IOTF (Kappa = 0.81; 95% CI: 0.76-0.87 in boys and 0.76; 95% CI: 0.68-0.83 in girls). Boys, children of mothers with high body mass index and having no sibling were more likely to be overweight or obese, regardless of the methods used. Our results show marked differences in prevalence of overweight and/or obesity estimated by these three classifications, and the impact of the choice of classification system should be considered with caution according to the purpose of the estimation.

Keywords: obesity, overweight, prevalence, primary schoolchildren, socio-demographic factor, Thailand

Correspondence: Seo Ah Hong, ASEAN Institute for Health Development, Mahidol University, Salaya, Phutthamonthon, Nakhon Pathom 73170, Thailand.

Tel: +66 (0) 2441 9040-3 ext 16; Fax: +66 (0) 2441 9044

E-mail: seoah.hon@mahidol.ac.th