Food insecurity and the metabolic syndrome among women from low income communities in Malaysia

ABSTRACT

This cross-sectional study examined the relationship between household food insecurity and the metabolic syndrome (MetS) among reproductive-aged women (n=625) in low income communities. The Radimer/Cornell Hunger and Food Insecurity instrument was utilized to assess food insecurity. Anthropometry, diet diversity, blood pressure and fasting venous blood for lipid and glucose profile were also obtained. MetS was defined as having at least 3 risk factors and is in accordance with the Harmonized criteria. The prevalence of food insecurity and MetS was 78.4% (household food insecure, 26.7%; individual food insecure, 25.3%; child hunger, 26.4%) and 25.6%, respectively. While more food secure than food insecure women had elevated glucose (food secure, 54.8% vs food insecure, 37.3-46.1%), total cholesterol (food secure, 54.1% vs food insecure, 32.1-40.7%) and LDL-cholesterol (food secure, 63.7% vs food insecure, 40.6-48.7%), the percentage of women with overweight/obesity, abdominal obesity, hypertension, high triglyceride, low HDL-cholesterol and MetS did not vary significantly by food insecurity status. However, after controlling for demographic and socioeconomic covariates, women in food insecure households were less likely to have MetS (individual food insecure and child hunger) ($p<0.05$), abdominal obesity (individual food insecure and child hunger) ($p<0.01$), elevated glucose (household food insecure), total cholesterol (child hunger) ($p<0.05$) and LDL-cholesterol (household food insecure and child hunger) ($p<0.05$) compared to food secure women. Efforts to improve food insecurity of low income households undergoing nutrition transition should address availability and accessibility to healthy food choices and nutrition education that could reduce the risk of diet-related chronic diseases.

Keyword: Metabolic syndrome; Food insecurity; Harmonized criteria; Low income communities; Reproductive age women