

ABSTRACT

Introduction: Food security is a condition that defined as physical and economical access to sufficient, safe and nutritious foods to meet dietary needs and food preferences for an active and healthy life for all social household members.

Aim: The cross sectional study was conducted to determine the association of household food security with the nutrition status of the adult women in rural and estate sectors.

Methods: A sample of 446 households with adult women was recruited from rural and estate sectors. Anthropometric measurements and dietary data were obtained from all subjects. United States Department of Agriculture (USDA) food security core module was used to determine the household food security level.

Results: percentage of households which had food secure was high in rural sector (43.2%). The prevalence of food insecurity was high in estate sector. Majority of women were included in normal range of BMI in rural and estate sectors (35.1% and 48.3% respectively). Mean energy intake and macronutrient intakes of adult women were not at satisfactory level. Binary logistic regression analysis showed that households with lower family income and lower maternal income level, high food ratio and lower maternal education level had lower odd ratios of being food secure in rural and estate communities. Women in food secure households had lower odds for lower BMI, lower energy adequacy, lower protein adequacy and higher waist circumference in rural and estate communities.

Conclusion: In conclusion, households with low family income level, high food ratio and lower maternal education level are less likely to be food secure in rural community. Women in food secure households have less potential for low BMI ($\geq 18.5 \text{ kg/m}^2$) and higher ($> 80 \text{ cm}$) waist circumference in rural community. Households with low income level and low maternal income level are less likely to be food secure in estate community. Women in food secure households are less likely to achieve energy and protein inadequacy and low BMI in estate community.

Key words: Household food security, Nutrition status, adult women