Household food insecurity is associated with lower dietary total antioxidant capacity of Korean adults

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Food insecurity has been reported to be associated with lower diet quality and lower intake of fruits and vegetables which might lead to decreased dietary total antioxidant capacity (TAC). However, little is known about the association between food insecurity and dietary TAC. This cross sectional study aimed to investigate the relationship of food insecurity and dietary TAC among 33,527 Korean adults in the Korea National Health and Nutrition Examination Survey 2007-2012. Dietary TAC was estimated from the 24 hours dietary recall data using a TAC database of common Korean foods. Results showed that 5.8% of male adults and 6.7% of female adults were in food insecure households. Mean dietary TAC was significantly lower in food insecure groups (total 378.85 mg VCE/d; male 392.01 mg VCE/d; female 368.25 mg VCE/d) compared to food secure groups (total 588.55 mg VCE/d; male 575.81 mg VCE/d; female 601.11 mg VCE/d). The major contributing food groups to dietary TAC were fruits, vegetables and legumes and legume products in both groups but dietary TAC from each food group was significantly lower in food insecure group (170.42 mg VCE/d, 141.39 mg VCE/d and 41.83 mg VCE/d) compared with food secure group (315.24 mg VCE/d, 176.01 mg VCE/d and 50.01 mg VCE/d). This study demonstrated that food insecurity is associated with lower dietary TAC in a representative Korean population. Further research on the health effects of reduced dietary TAC among food insecure Korean adults is needed.

Biography
Hyojee Joung is a Professor of Public Health Nutrition at the Seoul National University. She has authored and co-authored more than 150 articles in peer-reviewed journals as well as several book chapters. She has served on dozens of scientific committees and advisory boards of academic associations in Korea and abroad.

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