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STABILITY OF DIETARY PATTERN IN FUKUSHIMA RESIDENTS AFTER THE GREAT EAST JAPAN EARTHQUAKE: THE FUKUSHIMA HEALTH MANAGEMENT SURVEY 2011-2013

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Background: Dietary patterns more closely resemble actual eating behaviors because multiple food groups, not single food group or nutrient, are considered. The aim of this study was to assess whether dietary patterns changed in Fukushima residents by using pattern scores to track individual diets after the great East Japan Earthquake on Mar' 11, 2011.

Design: We used data from the mental health and lifestyle survey between 2011 and 2013, which assessed the mental health and lifestyle in Fukushima residents after the disaster. Total 156,477 participants aged ≥ 16 year-of-old with a 19-item food frequency questionnaire were available for this analysis. Year- and sex-specific dietary patterns were determined by the principal component analysis (PCA). Natural dietary pattern scores were calculated at each survey year. Applied scores in 2012 and 2013 were calculated by multiplying the coefficients from the PCA in 2011 by individual's frequencies of consumption standardized to the mean and SD observed in 2011, respectively.

Results: Three identified dietary patterns, labeled 'vegetable', 'juice/milk', and 'meat', were visualized similarly in men and women and among years. Spearman correlation coefficients were 0.58-0.75 for natural and applied scores of the 'vegetable' and the 'juice/milk' pattern and 0.48-0.56 for the 'meat' pattern. Applied scores of the 'vegetable' and the 'juice/milk' pattern increased both in men and women along the years. Comparing to evacuate areas, participants in non-evacuate areas had higher 'vegetable' pattern scores, lower 'juice/milk' pattern scores, and the same 'meat' pattern scores.

Conclusions: Slight changes of dietary patterns have been observed between 2011 and 2013, with the 'vegetable' and the 'juice/milk' pattern scores increasing and the 'meat' pattern scores maintaining stable. Careful investigation of those who are insufficient intake of the 'vegetable' pattern is needed.

Biography

Enbo Ma is a Public Health Physician. His research focuses on epidemiology and related risk factors of cancer and cardiovascular diseases in Asian populations. He is an Associate Professor in the Fukushima Medical University. Enbo Ma obtained the B.M. at Baotou Medical College in 1990, and the M.Sci at Peking Union Medical College & Chinese Academy of Medical Sciences in 1998, China. He got the Ph.D. at University of Tsukuba in 2007, Japan. His research articles on associations between nutrition and health outcomes have been published in Trop Med Health, J Dev Orig Health Dis, J Epidemiol, Public Health Nutr, PLoS One, Br J Nutr, J Nutr, Nutr Cancer, BMC Cancer, etc. He received the Outstanding Poster Presentation 2013, Japan Epidemiological Association in 2013, the 14th Kawai Memorial Prize, Japan Health and Welfare Statistics Association in 2013, and the Tropical Medicine and Health Best Paper Award, Japanese Society of Tropical Medicine in 2015 and 2016. Enbo Ma obtained the B.M. at Baotou Medical College in 1990, and the M.Sci at Peking Union Medical College & Chinese Academy of Medical Sciences in 1998, China. He got the Ph.D. at University of Tsukuba in 2007, Japan. His research articles on associations between nutrition and health outcomes have been published in Trop Med Health, J Dev Orig Health Dis, J Epidemiol, Public Health Nutr, PLoS One, Br J Nutr, J Nutr, Nutr Cancer, BMC Cancer, etc.

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