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HEALTH IMPACT ASSESSMENT BY INCOME LEVEL DUE TO HEATWAVE

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Health impact of high temperature has been reported since the early 20th century. In South Korea, it is reported that mortality increases with temperature above city-specific thresholds during the hot season in Seoul. However, the health impact of high temperature according to vulnerability on morbidity has been inconclusive in South Korea. The goal of this analysis was to examine health impact of high temperature, according to vulnerability on morbidity in summer (May-September) Seoul, South Korea, from 2003 to 2013. To examine the distributed lag effects, we fitted a constrained distributed lag model that included lagged exposure variables as covariates, applying a function of days of lag according to B-spline bases. In our study, morbidity data are episode data based on patients, with applying the episode of care in National Health Insurance Service – National Sample Cohort (2002~2013). We examined heat stroke in two age categories: all ages and those over age 65, low level of income, high region of deprivation. The summer temperature thresholds were 26.1°C in Seoul. A 1°C increase in temperatures above morbidity-specific thresholds was associated with increase in heat stroke episode counts for all ages, and for those over age 65 of 35.86% and 50.05%, 44.56% and 52.42% for low level of income, 42.28% and 62.62% for high region of deprivation. Associations were stronger for low level of income and high region of deprivation in heat stroke, to a lesser extent, total group. Our study found that high temperature was associated increased risk of heat stroke, according to vulnerability in Seoul. Consequentially, evidence of this study has the potential to inform public health efforts, such as heat warning systems for differential high temperature according to vulnerability.

Biography

Haeyong Pak has his expertise in health evaluation and air pollution in Public Health and Environmental. He was a Practitioner of Health Impact Assessment for four years at KEI (Korea Environmental Institute). He is currently studying health insurance policies at the National Health Insurance Service Ilsan Hospital. His recent areas of interest include artificial intelligence and climate change modeling clinical trials.

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