

## Heat Waves and Hospital Admissions for Mental Disorders in Hanoi Vietnam

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**Abstract :** There are recent studies from high income countries reporting an association between heat waves and hospital admissions for mental health disorders. It is not previously studied if such relations exist in sub-tropical and tropical low- and middle-income countries. In this study from Vietnam, the assumption was that hospital admissions for mental disorders may be triggered, or exacerbated, by heat exposure and heat waves. A database from Hanoi Mental Hospital with mental disorders diagnosed by the International Classification of Diseases 10, spanning over five years, was used to estimate the heatwave-related impacts on admissions for mental disorders. The relationship was analysed by a Negative Binomial regression model accounting for year, month, and days of week. The focus of the study was heat-wave events with periods of three or seven consecutive days above the threshold of 35oC daily maximum temperature. The preliminary study results indicated that heat-waves increased the risks for hospital admission for mental disorders (F00-79) from heat-waves of three and seven days with relative risks (RRs) of 1.16 (1.01-1.33) and 1.42 (1.02-1.99) respectively, when compared with non-heat-wave periods. Heatwave-related admissions for mental disorders increased statistically significantly among men, among residents in rural communities and in elderly. Moreover, cases for organic mental disorders including symptomatic illnesses (F0-9) and mental retardation (F70-79) raised in high risks during heat waves. The findings are novel studying a sub-tropical middle-income city, facing rapid urbanisation and epidemiological and demographic transitions.

**Keywords :** mental disorders, admissions for F0-9 or F70-79, maximum temperature, heat waves

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