

Heat makes crime boil over - study

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Crime and violence in Jamaica can be partly attributed to the weather, according to the findings of an international study conducted in the United States.

A group of scientists from the University of Berkeley in California discovered a significant correlation between high temperatures, economic productivity, and aggression globally and found that marginal changes in temperature or rainfall correlated with a reduction in productivity and a rise in murder and other forms of violent crime, including group conflicts and war.

"There's a couple of different channels at play and it really depends on the setting, so in some of the crime studies that we have, say from the US where we find that in a given week or month that is very hot we see spikes in violent crime," explained Ted Miguel, one of the co-authors of the study.

"Psychologists have developed theories and they have data to suggest that people become aggressive when it's very hot - your heart rate is higher, your adrenaline levels or cortisol levels are higher, there's a bunch of changes in the body. There may be changes to serotonin in the brain - so there are a number of changes to the human physiology and neurophysiology at high temperatures and psychologists have documented in many settings that that's associated with greater aggression."

Contributing factors

Miguel said in the case of Caribbean countries like Jamaica, both the neuro-physiological mechanism and economic mechanism are contributing factors to rates of crime and violence.

Some international critics have branded the research as reductionist, explaining that crime and violence is just one expression of a collection of competing socio-economic and political factors that the study seemingly overlooks. One of those urging restraint when assessing the research is Dr Winston De La Haye, consultant psychiatrist and lecturer at the University of the West Indies.

"My knowledge of the multiple variables involved would make me a little cautious in interpreting research of that nature," explained De La Haye, who said the research findings, if true, were compelling.

"What it would imply is areas like Sweden, for example, compared to areas like Jamaica or other countries in Africa closer to the equator, where temperatures are higher, then you should see significant differences and probably should have very little violence and so on in those northern countries - which isn't necessarily true, so that alone shows you that the other confounding variables really must be taken into consideration," he noted.

The study was published on August 1 in **Science Magazine** by Miguel and his co-authors, Solomon Hsiang and Marshall Burke.

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