

Review of: "Thermal Stress and Dengue Fever: Exploring the Correlation between Elevated Temperatures and Heat Waves in Disease Dynamics"

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Potential competing interests: No potential competing interests to declare.

Qeios Reviewer Comments – Bukhar et al 2024

General Comment:

As a review, this article is supposed to have a Methods section. Sections are supposed to be divided into Background, Methods, and Results/Analysis.

In the Methods section, authors should explain the approach they used to gather data, what sites they used, and their inclusion and exclusion criteria for articles consulted, etc.

Introduction

Please correct: "...for both mitigating the disease's impact and..." to "for both mitigating the impact of this disease and..."

"This investigation aims to delve..." should be changed to "This review," or "This synthesis..."

Dengue Fever: A Brief Overview

Species names should be in italics, in line 2 of this section, and in the whole manuscript.

What is missing in the introduction and in this section is concrete examples from which a reader, even if a lay person, can appreciate the scale of the burden of dengue. Authors need to provide specific examples; for example, the recent escalation in cases and mortalities in countries like Bangladesh, with numbers on cases and mortalities reported, etc. What of Pakistan? The Punjab region? etc.

In this section, authors should also highlight the issue of insecticide resistance with respect to the vector control they mentioned.

Epidemiological Studies and Observations

The study's results indicated that the risk of dengue infection increased by 13% for each 1°C rise in high temperatures above the reference values [38]. Which study is this? There should be context before this. Review this sentence.

The whole of this section was poorly written. It reads like a report, not a review of publications. For example, authors should write like this: "This study identified significant heterogeneity in dengue infection, due to..." "For example, several studies have established that heat waves..."

Public Health Implications

This is also a poorly written section, with no references at all. A review, as a synthesis of facts, should be referenced for each paragraph. Public health implications of what? Dengue and its transmission or impact of climate change. This section should be expanded to cite specific examples of the public health implications of climate change on dengue transmission, for example, the sporadic outbreaks in many places around the world, and especially the burden in countries like Bangladesh, etc.

Challenges in Dengue Control

This should cover the lack of vaccines, failure of vector control measures, including insecticide/larviciding resistance, lack of facilities in developing countries, etc.