

## SPATIAL AND DEMOGRAPHIC DIMENSIONS OF DENGUE EPIDEMIC: A STUDY IN KOLONNAWA DIVISIONAL SECRETARIAT, SRI LANKA

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**Abstract:** *Dengue can be indicated as the most powerful viral disease which caused by a mosquito as recognized by the international level. The tropical zonal island Sri Lanka is also a country highly affected by Dengue. Within Sri Lanka, Colombo District has recorded as the highest number of Dengue patients in Every year. Kolonnawa medical health division can be identified as a high-risk Dengue affected zone outside of Colombo. This study was carried out to identify whether there are any Spatial and Demographic distribution variation of the distribution of Dengue cases in Kolonnawa Divisional Secretariat division in Colombo district. Therefore, The Main objective is to recognize the distribution pattern of the Dengue patients in the study area in 2019. The study was carried out using 488 recorded dengue cases from May to September 2019 in the area. Integrated use of ArcGIS 10.1 software along with Microsoft Excel analytical tool were used to accomplished the data analysis. According to the results, five main Dengue high-risk hotspots have been identified in the region. Considering the sex composition factor of the dengue affected individuals, 280 males and 215 females were identified during the study period which showed the male as the highly vulnerable group for the Dengue in the study area. Three hotspots were reported with more male patients whereas the other hotspots reveal slight changes of gender wise cases. The demographic variations of hotspot reveals that land use factors have influenced the Dengue cases in several hotspots. Spatial and demographic analysis are important for the future dengue prevention campaigns, Medical officers can easily recognize the high risk age limits with the sex composition, It will be compatible options to educate them and empower the future Dengue prevention campaigns too.*

**Keywords:** Dengue, Kolonnawa, Hotspot, Age, Sex Composition

### Introduction

Dengue fever is a viral disease which is transmitted from person to person via the *Aedes aegypti* and *Aedes albopictus* mosquitoes (Egger et al, 2008). Dengue ranges from classic dengue fever to dengue haemorrhagic fever to the most serious type, dengue shock syndrome (Egger et al., 2008). Dengue fever has reappeared globally as one of the world's most infectious diseases. It is revealed that every year about 60 million people get affected by Dengue fever Yet those who live in Dengue high risk areas are higher than those who are affected. The unrecognized Dengue patients are twice the amount of truly recognized Dengue patients. (World Health Organization, 2016).

The word “dengue” may have come from Swahili, and means “caused by evil spirit”. Alternatively, it may have come from the Spanish word “dengue” that originally came

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