

Analysis of correlation between prevalence of dengue infection and environmental literacy of residents in selected areas of Anuradhapura district

Extended Abstract

YMPGCPK Yaparathne¹

Background

In Sri Lanka, Dengue is initially confirmed in 1962. The first major outbreak was in 1965 and first major epidemics were reported in 1989. Since 2010, approximately 25000 cases were reported annually (Epidemiology Unit, 2016). The congested areas adjacent to the cities were the most vulnerable places identified. One of the main reasons would be the poor environmental literacy among those residents who have low socioeconomic status. Many studies focused only on symptomatic dengue infection for the calculation of the prevalence of the disease. Therefore, in this study, intended to include both symptomatic and asymptomatic individuals which reflect the actual amount of infection undergoing in a particular community.

This research focuses on the importance of the environmental literacy that helps to improve the quality of the environment and health in Sri Lanka. In today's world, the term environmental literacy serves a very similar function. Environmental literacy is the capacity of an individual to act successfully in daily life on a broad understanding of how people and societies relate to each other and to the natural systems, and how they might do so sustainably. This requires sufficient awareness, knowledge, skills and attitudes to incorporate appropriate environmental considerations into daily decisions about consumption, lifestyle, career, and civics, and to engage in individual and collective action (O'Brien, 2007).

Objectives

Proper management of the environment is required to control the dengue prevalence in all districts of Sri Lanka. This research mainly focused on identifying the relationship between prevalence of dengue infection and environmental literacy of the residents in selected areas of Anuradhapura district. Identifying the situation of the prevalence of

dengue and level of environmental literacy among the community of the study area is addressed by this research.

Methodology

Two Grama Niladari (GN) divisions with and without dengue prevalence in Anuradhapura District were selected for this study. Investigation of the prevalence of IgG antibody in a community can be used to estimate how much of that particular community has been infected by the virus. The primary data about the environmental literacy was collected by using questionnaire, field observation, and interviews. This study applied non-parametric correlation method to analyse the data.

Results

According to the results of this research, residents living in Nuwara wawa GN division have high environmental literacy level than the Wannikulama kotasa IV GN division. Further, according to the IgG antibody test, 4.3% of dengue prevalence reported in Wannikulama kotasa IV GN division. Although there is a relationship between environmental literacy and dengue prevalence in both areas but environmental literacy is not the main reason that affects to the dengue prevalence in the Wannikulama kotasa IV GN division. According to the field observations, it was found that high population density and unplanned waste management are the main reasons for the dengue prevalence in Wannikulama kotasa IV GN division.

Conclusion and Recommendation

According to the data analysis of this research, it was able to realize that some interpretations about the reasons that affect the dengue prevalence. Some suggestions to control the dengue problem can be given not only in the study area but also at the national level. In the light of the present study, the health authorities are recommended to enhance the knowledge and application of preventive measures through a massive awareness campaign. In order to improve the situation of dengue controlling process, it is essential to introduce new techniques and new standards for the houses and other constructions in order to control the mosquito breeding places. Local authorities should not give permissions to construct the houses and should not approve the plans without the standard dengue controlling techniques for the houses. The government should incorporate the environmental management, environmental pollution, and solid waste management strategies into the school

¹ Department of Environmental Management, Rajarata University of Sri Lanka, Mihintale, Sri Lanka.

syllabus, especially in primary and secondary education system in Sri Lanka.

Keywords: dengue prevalence, environmental literacy, Anuradhapura, pollution, education

References

www.epid.gov.lk/ Epidemiology unit, Ministry of Health., 2016. *Dengue Updates*.

O'Brien, S. R. M., 2007. *"Indications of environmental literacy: using a new survey instrument to measure awareness, Ames, Iowa: Iowa State University.*