

The comparison of environmental conditions between hotspot and non hotspot areas of dengue outbreak in Selangor, Malaysia

ABSTRACT

Dengue fever is one of the most killer vectorborne disease in the world and Malaysia has recorded increases in number of dengue cases and deaths since 2012. For several years, Selangor state recorded the highest number of cases and deaths in Malaysia due to dengue fever. Most of the dengue infections occur among people who live in hotspot areas of dengue, and less likely to occur among people who live in non-hotspot areas. This study aims to compare the difference of environmental conditions between hotspot and non-hotspot areas of dengue. 20 hotspot and 20 non-hotspot areas in Selangor were chosen in this study and 10 variables were checked and given scale according to their conditions. Total marks of each area were then calculated and difference in means between hotspot and non-hotspot areas was compared using Independent T-test. Result shows that there was significant mean difference of marks of environmental conditions between both areas (p value: <0.001; 28.30 vs 22.90). The result of this study shows that non-hotspot areas were cleaner and more hygienic than hotspot areas, which suggests public health education and routine hygiene inspection to be done more frequently in hotspot areas to ensure their cleanliness in order to fight dengue outbreak, which consequently helps reduce the number dengue cases and deaths.

Keyword: Dengue; Dengue environment; Dengue incidence; Dengue hotspot; Dengue outbreak