SANITATION-RELATED BEHAVIOR, CONTAINER INDEX, AND THEIR ASSOCIATIONS WITH DENGUE HEMORRHAGIC FEVER INCIDENCE IN KARANGANYAR, CENTRAL JAVA

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) causes not only epidemic but also social and economic impacts. Environmental sanitation, water reservoirs, and community behavior can influence the incidence of DHF. This study aimed to examine sanitation-related behavior, container index, and their associations with dengue hemorrhagic fever incidence.

Subjects and Method: This was an analytic observational field study using case control design. The study was conducted in sub-districts with the highest and lowest DHF cases in Karanganyar, Central Java, from May to July, 2017. A total sample of 120 study subjects was selected for this study using fixed disease sampling, including 40 people with DHF and 80 people without DHF. The dependent variable was DHF. The independent variables were age, education level, family income, container index, and sanitation behavior. The data were measured by a set of questionnaire and examined using path analysis.

Results: Sanitation behavior (b= 1.50; 95% CI= 0.57 to 2.42, p= 0.001) and Container Index (b= 0.90; 95% CI= 0.03 to 1.84; p= 0.057) were directly and positively associated with DHF incidence. Container Index was associated with sanitation behavior (b= 2.09, 95% CI= 1.21 to 2.97, p<0.001). Age (b= -0.76, 95% CI= -1.60 to 0.08, p= 0.074), education level (b=-1.02, 95% CI= -1.87 to -0.17, p= 0.019), and family income (b= -0.70, 95% CI= -1.60 to 0.19, p= 0.122) were associated with sanitation behavior.

Conclusion: DHF incidence is directly and positively associated with sanitation behavior, and container index. DHF incidence is indirectly associated with age, education level, and family income.

Keywords: dengue haemorhagic fever, sanitation, container index, behavior, path analysis

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