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Spatial distribution of knowledge , attitude and practice on leptospirosis prevention and its predictors using stratum risk identification methods among residents in a flood prone area in Kuantan, Pahang, Malaysia (Article)

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Abstract

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Leptospirosis is a preventable zoonosis of public health importance. Due to seasonal floods and paucity of studies regarding leptospirosis preventive practices in community setting in this country, a study was conducted to determine spatial distribution of knowledge, attitude and practice on leptospirosis preventive practices using stratum risk identification methods among residents in a flood prone area in Kuantan via Geographical Information System (GIS). A cross-sectional study was conducted in Perkampungan Sungai Isap, Kuantan, Pahang, which obtained 568 respondents by stratified proportionate random sampling technique. Data were collected using a validated guided questionnaire. Geographical coordinates were obtained using Garmin gpsmap 62s. Multivariate logistic regression was done using SPSS version 22.0 and spatial mapping using ArcGIS version 9. The response rate was 83.4%. Flood-risk strata were divided into high risk (less than 500 metres), medium risk (500 to 1000 metres) and low risk (more than 1000 metres). Linear measurements were made using ArcMap. Overall, majority (68%) of the respondents had good knowledge. However, only 38% of the respondents had satisfactory attitude and 18% had satisfactory practice. Spatial mapping showed that the lower the stratum risk towards flooding, the poorer the preventive practices. Multivariate logistic regression showed the predictors of satisfactory leptospirosis preventive practices were high-risk stratum (aOR=4.28, 95% CI [1.92, 9.57], P < 0.001), good knowledge (aOR=1.73, 95% CI [1.04, 2.90], P < 0.05) and age group 30 to 39 (aOR=0.30, 95% CI [0.11, 0.83], P < 0.05). In conclusion, GIS is a valuable tool for leptospirosis surveillance by facilitating disease prevention programmes to targeted risk areas. © 2018, Asian Journal of Agriculture and Biology.

SciVal Topic Prominence ⓘ

Topic: Leptospirosis | Leptospira | canine leptospirosis

Prominence percentile: 97.696 ⓘ

Author keywords

GIS Leptospirosis Preventive Practices Stratum Risk Identification

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