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Effectiveness of Community-based Dengue Vector Control: Trial in Kassala City- Eastern Sudan

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Dengue is becoming an endemic disease in Eastern Sudan with repeated outbreaks during last two decades. This study aimed to investigate an effective method for community participation in dengue vector control (*Aedes aegypti*) in Kassala city. The study was conducted during May to December 2011. A cluster was composed in eight neighborhood; each cluster was formed of three grouped houses. One of these grouped houses was allocated randomly into one of three study arms: arm 1: intervention of community volunteers; arm 2: intervention of house holder education and arm 3: Control. In arm 1, sixteen volunteers (two per cluster) inspected the water containers of houses weekly. In the house holder arm 2, householders received two educational sessions for breeding site of vectors source elimination and management of their water containers. In the control arm, houses did not receive any interventions. Bimonthly Entomological survey was conducted for eight months in each cluster of the study. The covering situation of inspected water containers was also recorded. From 9537 inspected containers, 545(5.71%) containers were found positive for aquatic stages of *Aedes. aegypti*. Zieers (localwater containers) composed 436 (80%) from the positive containers. ANOVA analyses were done between the three arms and no significant differences were found. Those entomological indices declined in community volunteers and householders arms. Also, the percentage of covering Zieers increased from 14.1% to 64.7% in community volunteer's arm and from 12.1% to 32.6% in house holder arm. In control arm there was a fluctuation in all parameters. The arm of Community volunteers may be more effective in increasing the awareness of covering containers and decline of the entomological indices. Thus, it may be used as an approach for community participation in Dengue vector control in Kassala city.

Biography

Hanaa Adli Siam, a scientific researcher in Department of Medical Entomology – National Public Health Laboratory –Federal Ministry of Health – Sudan, since 2012. She has a Master degree in Medical Entomology and vector control from Faculty of Science - University of Khartoum 2010. She has two published papers and participated in about ten international conferences and workshops.

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