

#### **4.1 Dengue risk based on sociocultural/socioeconomic geographic factors in Kelaniya MOH area.**

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##### **ABSTRACT**

THIS STUDY INVOLVES GEOGRAPHIC, SOCIOCULTURAL AND SOCIOECONOMIC ANALYSIS CONDUCTED FOR THE YEAR 2008 DENGUE FEVER OUTBREAKS IN KELANIYA MEDICAL OFFICER OF HEALTH (MOH) AREA. LOCATIONS OF THE RESIDENCE OF THE 120 DENGUE CASES REPORTED AT KELANIYA MOH OFFICE WERE OBTAINED USING GPS. A STRUCTURED QUESTIONNAIRE THAT INCLUDED 16 OF PRIMARY DATA WAS GIVEN TO EACH PATIENT HOUSEHOLD AFTER VISITING INDIVIDUAL OF THEM AT RESIDENCE. GEOGRAPHIC ATTRIBUTES RELATED TO DENGUE INCIDENCE WERE RECORDED CONCURRENTLY. PRIMARY DATA INCLUDED FAMILY DETAILS, AGE AND GENDER OF THE FAMILY MEMBERS, LIVING CONDITIONS, AWARENESS AND KNOWLEDGE ABOUT DENGUE, HEALTH CARE, HUMAN DWELLINGS, OCCUPATIONAL STATUS, MOSQUITO PROTECTION PRACTICES, ACCESSIBILITY BY ROAD, SANITATION PRACTICES, WASTE DISPOSAL MANAGEMENT AND FREQUENCY, CULTURAL PRACTICES REGARDING STORAGE OF WATER CONTAINERS, VEGETATION COVER AROUND THE HOUSES, AND INDOOR /OUTDOOR *Aedes* MOSQUITO BREEDING PLACES. MOSQUITO LARVAE COLLECTED FROM BOTH INDOOR AND OUTDOOR POOLS WERE REARED UNTIL ADULTS ARE EMERGED IN THE LABORATORY.

RESULTS REVEALED THAT 86% HOUSEHOLDS HAVE PERMANENT RESIDENCE. PERCENTAGE INFECTED MALE: FEMALE RATIO WAS 48%: 52% WHICH IS NOT SIGNIFICANTLY DIFFERENT. THE VULNERABILITY OF THE AGE GROUPS FOR DENGUE FEVER WERE FOUND AS 1-5 YRS (24%), 6-18 YRS (44%), 19-55 YRS (24%) AND MORE THAN 55 YRS (3%). THE ADULT MOSQUITO POPULATION CONTAINED 77.6% OF *Aedes albopictus* ATTAINING INDOOR (20.7%) AND OUTDOOR (79.3%) BREEDING SITES WHILE 22.4% OF *Ae. aegypti* ATTAINING INDOOR (38.6 %) AND OUTDOOR (61.4%) BREEDING SITES. ONLY 32% OF HOUSE PREMISES WERE DENSELY COVERED WITH VEGETATION. RECORDED DENGUE CASES AND GEOGRAPHIC FACTORS WERE LINKED TO A GIS DATABASE AND PRESENTED IN DIGITIZED MAPS TO SHOW DENGUE RISK FACTORS IN KELANIYA MOH AREA.