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**BOOK OF EXTENDED
ABSTRACTS**



KNOWLEDGE, ATTITUDE AND PRACTICE ON DENGUE PREVENTION AMONG SECONDARY SCHOOL STUDENTS IN UNIVERSITY COMMUNITY PROJECT AREA

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Abstract

Introduction: Dengue fever is an infectious disease that is transmitted by mosquito bites. Up to 3.9 billion people in 128 countries, including Sri Lanka, are at risk of contracting the disease. This study was aimed to evaluate the knowledge, attitudes, and practice on dengue prevention among secondary school students in the university community project area.

Method: A cross-sectional descriptive study was conducted among 137 students aged 14-16 years old attached to selected schools in the university community project area (UCPA) with a complete enumeration from August 2020 to August 2021. A validated self-administered questionnaire was used as a data collection instrument. Statistical software (SPSS 26.0) was used to analyze the data, and p-value < 0.05 was considered significant for all analyses. Ethical approval (E/2020/42) was obtained from the Ethical Review Committee, Faculty of Health - Care Sciences, Eastern University, Sri Lanka.

Results: Majority (68.6%) of the study population had good knowledge and good practice (67.9%) on dengue prevention but had poor attitudes (44.5%) towards dengue prevention. Evaluations of dengue prevention practices showed that cleaning and scrubbing of water containers, such as vases, pot bases, and water tanks (91.2%), removes water from exterior crumbs such as new tires, cans, and empty bottles (86.1%). Most (86.9%) of the students used mosquito nets while sleeping. Around half the student population (54.7%) chose long-sleeved and well-covered clothing to avoid mosquito bites.

Conclusion: Results of this survey showed that the participants had good knowledge and good practices in dengue prevention but had poor attitudes.

Keywords: Dengue, Knowledge, Attitude, Practice, Batticaloa, Sri Lanka

Introduction: Dengue fever is an infectious disease transmitted by the bite of mosquitoes. Most arboviral disease outbreaks appear during rainy seasons, and it is associated with some environmental factors such as rainfall, humidity, and temperature (Kumaran et al., 2018). Four (4) Dengue viruses, single-stranded RNA viruses of the Flaviviridae family, are the most common cause of arboviral diseases worldwide. There are four different serotypes, namely DENV1, DENV2, DENV3, and DENV4, which cause dengue fever (DF), dengue hemorrhagic fever (DHF), and dengue shock syndrome (DSS). Infection with a specific dengue virus serotype causes lifelong immunity to that particular serotype but not cross-protective immunity. The virus is transmitted by the Aedes mosquito, mainly *Aedes aegypti* (Jayalath et al., 2018).

During five decades, dengue fever has increased rapidly up to 30-fold, making it a global public health concern in the world. The world health organization's international strategy for Dengue prevention aimed to scale back mortality rates by 50% and morbidity by 25% by 2020. Adopting an integrated vector management approach using community-based methods tailored to the local context is recommended to realize these objectives.

Dengue prevention and control can achieve through 3 methods. Those are physical control, biological control, and chemical control. Community-based prevention mostly belongs to the physical control method. Community-based control programs are developed to give knowledge and good practice to the community about the measures for eliminating mosquito breeding sites.

The insecticides have been utilized for mosquito control for several decades. These insecticides became the foremost commonly used integrated strategy. Nevertheless, the continual use developed resistance within the target vector population and may negatively impact the environment. To prevent the harmful effects of these compounds, researchers developed alternative control methods such as introducing plant-based insecticides instead of synthetic products. As we eliminate mosquito breeding sites, we can reduce the dengue fever burden by preventing mosquito bites. Mosquito bites can prevent by utilizing mosquito repellents, wearing well-covered clothes, and use mosquito nets (Rather et al., 2017).

Several studies have claimed that most dengue cases report dengue infection occurring domestically, and therefore, vector control has been embattled in residential areas. Therefore, this study was aimed to assess the knowledge, attitude, and practice of dengue prevention among secondary school students in the community project area, Batticaloa district.

Method: A cross-sectional descriptive study was conducted to assess the knowledge, attitude and practice of dengue prevention among secondary school students in the university community project area in Batticaloa district. Permission for this study already was obtained from the zonal director of education of Batticaloa and the principals of the relevant schools. The ethical approval was obtained from the Ethics Review Committee, Faculty of Health-Care Sciences, Eastern University, Sri Lanka.

First, informed written consent was obtained from the school students studying in grades 9, 10, and 11. Data were collected through a validated self-administered study questionnaire containing three sections: the first section to assess knowledge about dengue prevention, the second section to evaluate the attitudes on the prevention of dengue, and the third section to assess the practice of prevention of dengue transmission. All three sections include 16 questions. Points are given based on correct answers; 1 point for correct answers and 0 points for incorrect answers. In addition, the classification of knowledge, attitude, and practice is as follows: excellent (76-100%), good (45-75%), and poor (0-44%). Collected data analyzed using Statistical Package of Social Sciences (SPSS.V26).

Results and discussion: A total of 137 students from five schools participated in this research. Most of the respondents had sufficient knowledge about the transmission of dengue (68.6%). Regarding awareness of mosquito breeding places, a majority (94.9%) stated that clear stagnant water is the breeding place for dengue mosquitoes. Most (89.8%) participants agreed that the rainy season leads to an outbreak of dengue infection. Most (76.6%) participants were aware of the dengue mosquito biting habits and knew mosquito bites morning and evening of the day. 92.7% population believed that dengue is a fatal condition, and most (71.5%) of students think there are medicines to cure dengue. However, few (17.5%) participants knew there were no medicines for dengue, and very few (10.9%) did not know about treatment options for dengue.

In our study, below half (44.5%) of the population had a bad attitude toward dengue prevention. Most (57.7%) responded that proper waste disposal

(disposal of into bins) is ideal in dengue prevention by reducing the receptivity of disease vectors. 81% of students were aware that help and allow health authorities to fog and inspect around the house for keep clean environment.

This study revealed, most of the respondents had good practice of preventing dengue transmission. About 91.2% of students recognized that cleaning water containers such as flower vases, flower pots bases, and water storage tanks prevent mosquito breeding. 86.1% of participants of this study show that outdoor breeding sites such as tires, empty cans, and bottles also keep in clean inside the home. 87.6% of students aware that water drain systems in the home also causes dengue breeding places, and 88.3% of students recognized that covering water containers such as well and tanks is a strategy to prevent and control dengue.

Conclusion: Results of this survey revealed that the participants have better knowledge and good practices in dengue prevention but have poor attitudes. Therefore, secondary grade students should have regular advice on knowledge attitude and practice on dengue prevention, especially to increase the level of attitude. A well-organized awareness programme to the school students will improve the attitude on dengue prevention.

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