

UNIVERSITY TEKNOLOGI MARA

**COMPARATIVE CASE STUDY OF SOCIODEMOGRAPHIC AND
ENVIRONMENTAL FACTORS IN RASAH AND SEREMBAN**

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TABLE OF CONTENTS

DECLARATION BY STUDENT	I
INTELLECTUAL PROPERTIES	II
APPROVAL BY SUPERVISOR	IV
ACKNOWLEDGEMENT	V
ABSTRACT	XI
CHAPTER 1	1
INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	2
1.3 Objective	3
1.3.1 General Objective	3
1.3.2 Specific Objectives	3
1.4 Scope and Limitation	3
1.5 Significance of Study	4
CHAPTER 2	5
LITERATURE REVIEW	5
2.1 Dengue: Global and Local Context	5
2.1.1 Global Perspective on Dengue	5
2.1.2 Dengue in Malaysia.	7
2.2 Vectors: Role in Dengue Transmission	9
2.3 Current Global and Local Research on Dengue	11
2.4 Factors Influencing the Transmission and Infection of Dengue	14
2.5 Conclusion	16
CHAPTER 3	17
METHODOLOGY	17
3.1 Study Area.	17
3.2 Study Design	18
3.3 Data Collection	19
3.3.1 Phase one: Secondary Data analysis and Sociodemographic Characteristics.	19
3.3.2 Phase two: Environmental Physical Characteristics.	19
3.5 Ethical Considerations.	20

ABSTRACT

As commonly known tropical disease, the battle against eradication of dengue has yet to reap much success. In Malaysia, dengue disease is a major burden of disease as it caused more than 130,000 cases as per 2019. Efforts have been made by various private and government agencies to eradicate this vector-borne disease. As part of said effort, this cooperative case study aims to understand the patterns of cases and its patients in two localities in Seremban, Negeri Sembilan that have consistently produced high number of infected patients. Based on secondary data obtained from e-notification and e-dengue, variables such as sociodemographic and observations of localities were recorded. While the data yield almost 9 years of cases, analyses showed that dengue cases have no significant difference with either gender or age ($p\text{-value} > 0.05$), but for races, the analyses showed that there are high significant differences ($p\text{-value} < 0.05$). Observations of the physical environmental characteristics in both of these areas show common grown where, vegetation and abandoned building found to have been place of breeding for mosquitoes. Clearly, while the vector is not shown to be selective in choosing its victim, it is likely that both environment and human activities are closely related to dengue disease transmission such as proper disposal of domestic wastes and the presence of breeding grounds. Thus, this study can be used to formulate strategies to help improved and mitigate the problems.

CHAPTER 1

INTRODUCTION

1.1 Background

The first onset of dengue infection in Malaysia dated back in 1906 following the transmission from Singapore to Penang (Sake., 1902). The first epidemic outbreak was recorded in 1973 where there was a total of 969 cases and 54 deaths recorded (Wallace et al., 1980). Dengue infection worsened when there was infestation of disease among urban dwellers throughout the nation (Bakar et al., 2002). In fact, overcrowding of the population enhances the spreading rate and emergence of dengue (Gubler., 2011).

Globally, escalate of dengue cases among human population in over 128 countries have become a major concerned and has added to the global burden of disease. Not only that, dengue transmission shows little signs of reducing even though many research and mitigation programs have been worked on. Dengue fever is one of the major vector-borne viral diseases in the world, mainly in the tropical and subtropical regions (Antique et al., 2016; Dhiman et al., 2014), with countries like Malaysia, Singapore, Australia, Vietnam China Cambodia, Laos, and Philippine as well as countries in the Pacific Islands (Stanway., 2016) have reported a high number of cases over the years.

Malaysia was and ongoing as a developing country with a humid and hot climate that occurs throughout the year. Malaysia receives on average 250 centimeters of rainfall in a year and the average known temperature is 27 °C (Meteorological Department Malaysia., 2019). This condition is favored by *Aedes* mosquitoes that live with the human