

UNIVERSITI TEKNOLOGI MARA

**TEMPORAL PATTERN OF DENGUE
CASES IN CENTRAL ZONE OF
SHAH ALAM: A RETROSPECTIVE
STUDY FROM 2013 TO 2016**

MUHAMMAD SYUKRI BIN RAHMAT

Project submitted in fulfillment of the requirements for
the degree of
**Bachelor in Environmental Health and Safety
(Hons.)**

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DECLARATION BY STUDENT

Project entitled “Temporal Pattern of Dengue Cases in Central Zone of Shah Alam: A Retrospective Study from 2013 to 2016” is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Project Supervisor, Dr. Nazri Che Dom. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

Student’s Signature:

.....
MUHAMMAD SYUKRI BIN RAHMAT

2014809292

930608-14-5883

Date:

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In the name of Allah, The Most Gracious, The Most Merciful.

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TABLE OF CONTENT

TITLE PAGE	
DECLARATION BY STUDENT	ii
INTELLECTUAL PROPERTIES	iii
APPROVAL BY SUPERVISORS	v
AKNOWLEDGEMENT	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATION	xi
ABSTRACT	xii
CHAPTER 1: INTRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	3
1.3 Study Objective	5
1.3.1 General Objective	
1.3.2 Specific Objective	
1.4 Research Question	5
1.5 Significant of Study	6
1.6 Conceptual Framework	7
CHAPTER 2: LITERATURE REVIEW	
2.1 Background	9
2.2 Criteria of Systematic Literature Review	11
2.3 Risk Mapping Proposed in The Literature Review	15
2.4 Mapping Model in the Literature Review	18
2.5 Content in the Selected Literature Review	19

ABSTRACT

Temporal Pattern of Dengue Cases in Central Zone of Shah Alam: A Retrospective Study from 2013 to 2016

By

Muhammad Syukri Bin Rahmat (2014809292)

Introduction: The increasing number of dengue occurrence from year to year in this country has raised the urgent need to study on the temporal pattern of the dengue cases. Proper understanding on the temporal pattern is important in order to planning the strategy for controlling the dengue occurrence. **Objective:** The objective of the study was to identify the temporal pattern of dengue cases in central zone of Shah Alam, Selangor from 2013 to 2016. **Methodology:** In this study, daily confirmed dengue cases data from 4 years outbreak occurring in central zone of Shah Alam is utilized to compute the corresponding weekly cumulative percentage of total case numbers. Four time series data was being divided into two periods to examine the corresponding weekly cumulative percentages of case numbers for each period. Pearson's correlation coefficient was calculated to determine the pattern and behavior of the dengue cases occurrence. **Result:** Three cut-off points produce the most interesting pattern and behaviour and the most different outcome. The result implied that the temporal pattern of dengue cases in 2013 is markedly different when compared to the other three years (2014, 2015 and 2016). It was found that the temporal pattern of dengue cases has changed from 2013 to 2016 as the number of dengue cases in 2013 is high during the end of the year while for the other three years, the number of cases is low during end of the year but slightly high during the first 26 epid week. **Conclusion:** The outcomes of this study shows that the temporal pattern of dengue cases in the central zone of Shah Alam are differ for the last 4 years of occurrence. However the numbers are still keep increasing from year to year and proper preventive measure should be done quickly to break the chain of the transmission.

Keywords: *Dengue surveillance, dengue fever, dengue fever outbreak, temporal pattern of dengue cases, behaviour of DF outbreak and environmental factors*