

**UNIVERSITI TEKNOLOGI MARA**

**THE RELATIONSHIP BETWEEN BIRTH MONTHS AND  
PHYSICAL FITNESS PERFORMANCE AMONG YOUNG  
ATHLETES IN EAST COAST MALAYSIA**

**By**

**NIK INTAN KAMILIN BINTI NIK HEL**

**Research Project Report submitted in partial fulfilment of the requirements  
for the Degree of  
Bachelor of Sports Science (Hons.)**

**Faculty of Sports Science and Recreation**

**July 2015**

## AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA (UiTM). It is original and is the result of my own work, unless otherwise indicated or acknowledge as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

Name of Student : Nik Intan Kamilin Binti Nik Hel

Student I.D. No : 2013615712

Programme : Bachelor of Sports Science with Honours

Thesis/Dissertation

Title : Relationship between Birth Months and Physical Fitness  
Performance among Young Athletes in East Coast Malaysia

Signature of Student :



Date : July 2015

## **ABSTRACT**

### **Relationship between Birth Months and Physical Fitness Performance among Young Athletes in East Coast Malaysia**

The purpose of this study is to compare and verify the relationship between birth months and physical fitness ability of young athletes in East Coast Malaysia. There were 111 subject aged 12 years old participated for this study which comes from all district of East Coast Malaysia. The subjects were divided into three quarter or three groups which is 35 of them are in quarter 1. The quarter 1 or also known as early-year birth babies or young athletes are from January to April. Meanwhile, 35 subjects from 111 subjects are in quarter 2 or May to August group and the last one is quarter 3 which consist 41 subjects and they are end-year birth which is September to December. All of subjects were tested at Kompleks Terbuka, Kompleks Belia dan Sukan Panji, Kota Bharu, Kelantan. The physical fitness of subject was divided into anthropometric, aerobic and anaerobic test which is consisted of height measurement, weight and sitting height. Besides, for anaerobic test or exercise, the tests are arm span, sit and reach, hand grip strength and standing broad jump test. Next, for the aerobic test, there are shuttle run, Yoyo test, and 40m speed. One shot data study design was used for this study, subject performed test only on one occasion and the data was recorded. Descriptive statistic was used to describe physical fitness profile and ANOVA analysis is to compare mean differences of fitness level of three quarter birth month of young athletes in East Coast Malaysia.

## TABLE OF CONTENTS

DECLARATION FORM	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vii
LIST OF TABLES	viii
<b>I. CHAPTER ONE</b>	
<b>INTRODUCTION AND STATEMENT OF PROBLEM</b>	
1.0 Background of study	1
1.1 Introduction	1
1.2 Statement of problem	5
1.3 Research of subject	7
1.4 Hypothesis of the study	7
1.5 Operational terms	8
1.6 Limitations of the study	9
1.7 Delimitations	9
1.8 Assumptions	9
1.9 Significance of study	10
<b>II. CHAPTER TWO</b>	
<b>LITERATURE REVIEW</b>	
2.0 Introduction	11
2.1 Birth months definition	11
2.2 Youth and young athletes	14
2.3 Physical fitness definition	15
2.4 Health related fitness component	16

2.4.1	Body composition	16
2.4.2	Muscular strength	17
2.4.3	Flexibility	17
2.4.4	Cardiovascular endurance	18
2.4.5	Talent identification	18
2.4.5.1	Talent selection	19
2.4.5.2	Talent development	20

### **III. CHAPTER THREE METHODOLOGY**

3.0	Introduction	21
3.1	Research design	21
3.2	Design of study	23
3.3	Subjects selection	24
3.4	Measurements, tools and instrumentations	26
3.4.1	Assessment of body height	26
3.4.2	Assessment of body weight	27
3.4.3	Assessment of hand grip dynamometer	27
3.4.4	Assessment of modified sit and reach	28
3.4.5	Assessment of yoyo test and shuttle run	28
3.4.6	Assessment of power	29
3.4.8	Assessment of Speed	30
3.5	Research protocol	30
3.6	Research flow chart	31
3.7	Research statistical analysis	32