



UNIVERSITI TEKNOLOGI MARA

**EFFECT OF DIFFERENT REST PERIOD AFTER DYNAMIC WARM-  
UP PROTOCOL ON SPRINT PERFORMANCE AMONG UNIVERSITY  
FOOTBALL ATHLETES**

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## TABLE OF CONTENT

	<b>Page</b>
<b>LETTER OF TRANSMITTAL</b>	ii
<b>AUTHOR'S DECLARATION</b>	iii
<b>APPROVAL PAGE</b>	iv
<b>TABLE OF CONTENTS</b>	v
<b>LIST OF TABLS</b>	ix
<b>LIST OF FIGURES</b>	x
<b>ACKNOWLEDGEMENT</b>	xi
<b>ABSTRACT</b>	xii
 <b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background of study	1
1.2 Problem statement	3
1.3 Research question	5
1.4 Research objective	5
1.5 Hypothesis	6
1.6 Significance of study	7
1.7 Limitation of study	7
1.8 Delimitation	7

## ABSTRACT

The purpose of this study is to investigate effect of different rest period after dynamic warm-up protocols on sprint performance among football athletes. Twenty university football athletes ( $21.70 \pm 1.34$  years,  $63.79 \pm 2.63$  kilogram,  $167.55 \pm 3.27$  centimetres) were divided into four group equally; D1 (0 minute rest), D2 (5 minutes rest), D3 (10 minutes rest) and D4 (15 minutes rest) and had pre-test and post-test of 30 meters sprint test with three trials. There was significant effect for 0, 5 and 10 minutes rest period after dynamic warm-up protocol ( $p < .05$ ) indicating an increase in speed performance. Thus, it may be suitable to use rest period between 0 to 10 minutes after dynamic warm-up protocols for football athletes use in game or training for a better speed performance.

**Keyword:** *Rest Period, Dynamic Warm-Up, Sprint*

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 BACKGROUND OF THE STUDY**

Football is a sport that required high intensity, discontinuous, non-consistent exercise that need the football athletes to sprint at different duration. Football is also a sport that based on explosive actions such as dribbling, jumping, kicking and sprinting. The athletes also need rapid acceleration, agility and jumping in the training and during the game. An elite football athlete running about 10 km at average during the 90 minutes of game which equal to 80-90% of maximal heart rate needed (Stolen et al., 2005). These day, the elite football players have high ability in speed especially during a counterattack to the opponent team until they score a goal.

Speed is one of the physical components that is important especially for football players. The football athletes that have high speed action are the attracting moment in the game which directly have high chance of winning possession of the ball and the possibility to score goals are high. The football team that have a high-speed player, the percentage for them to control the game is higher than the opponent team. Speed is highly genetically inherent motor capability of as quickly as viable passing from one area to any other. Improvement of speed may be accomplished circuitously, by way of enhancing the technique of movement and by using running on developing the important muscle groups.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

Football is the game which play by two opposing teams attempt to score points by moving the ball around and past the goal or into the goal. Football is played in high intensity and requires the fitness components such as speed, agility, muscular endurance and cardiorespiratory fitness. Speed is one of the fitness components that is important to the player in this sport. Football game duration is more than 90 minutes including the warm-up and the additional time in the one game. According to Horička et al., (2014), an elite level player run approximately around 10 km at an average intensity reaching the anaerobic threshold with 80 to 90 percent of maximal heart rate during a 90-minute game. In addition, the football player need speed for the excellent in the game, winning the ball possession and scoring the goal. Thus, the speed helps the football players increase the speed performance during the game.

Impellizzeri et al. (2006) stated that the range of sprint distance during the game is between 1.5 to 10.5 m that required an acceleration and maximum speed performed by the football players. This happened with the players already in sprints and the speed at moderate level in the game. This shows that speed is crucial fitness component for the players to master in order to sprint and control the game speed. The attacking and defending players mostly performed the sprints in the game because the football game will have counter attack during the game. The