# RELATIONSHIP BETWEEN SELECTED FITNESS COMPONENTS OF SARAWAK TENNIS PLAYERS

## MOHAMAD AMIRUL BIN ZAINI
### 2015635278

## BACHELOR OF SPORTS SCIENCE (HONS)

## FACULTY OF SPORTS SCIENCE AND RECREATION

## UNIVERSITI TEKNOLOGI MARA SARAWAK

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## *ABSTRACT*

The purpose of the study was to develop and measure the fitness components of Sarawak tennis players. Thirteen young trained players in the age bracket 15 to 21 years old with experience of at least 2 years in playing tennis and have participated in at least SUKMA level were tested for eight fitness tests. A Pearson correlation test was conducted to examine the relationships among the variables. Significant correlations were found between all the variables ($p < .05$) except for, flexibility and muscular strength, muscular endurance, muscular power, agility, and speed endurance ($p > .05$). Muscular strength for the left hand was not significantly correlated with speed and aerobic capacity ($p > .05$). There was no significant relationship between speed and muscular power, agility and speed, muscular endurance and aerobic capacity ($p > .05$). Additionally, Speed and speed endurance showed no significant relationship with muscular endurance ($p > 0.5$). This study quantifies physical fitness profile using the tennis-specific tests that can help to upgrade Sarawak tennis players' performance by examining the relationships among all the fitness components. The findings would be beneficial for coaches to assess their trainees in tennis sports as well as be used as the guidelines for selection purposes.

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## INTRODUCTION

## 1.1    Background of Study

The specific technical skill in tennis is the main element of good tennis players for example racket and ball handling skill and stroke techniques (Ulbricht, Fernandez, & Ferraunti, 2013). In a match, tennis has been characterized by intermittent whole-body effort, alternating a short 2- 10 second intense activity of high intensity exercise and short 10-20 second recovery activity interrupted by several resting periods of longer duration for about 60-90 seconds with a typical average match time of 1.5 hour to some rare cases of more than 5 hours (Fernandez, Ulbricht & Ferraunti, 2014). After serving, a tennis player runs an average of 3 meters per shot and a total of 8 to 15 meters (Fernandez et al, 2014) with a change of direction 3 to 6 times during a typical rally (Practical on Court Application for Sports Science, 2012) in pursuit of one point. A tennis player might hit the ball an average of 4-5 times and complete 1300 to 3600 meters per hour of play, depending on the level of the player whether amateur or advanced and the surfaces of the court whether it is slow or fast respectively (Fernandez et al, 2014)

Physical fitness is defined as the capacity to perform an activity in a full range of physiological and psychological qualities (Ortega, Ruiz, Castillo, &

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# CHAPTER 2

# LITERATURE REVIEW

## 2.1    Introduction

Tennis has been characterized as intermittent whole-body effort, alternating between a short 2- 10 second of high intensity exercise and a short 10-20 second recovery activity interrupted by several resting periods of longer duration for about 60-90 second, with a typical average match time of 1.5 hour to more than 5 hours (Fernandez et al, 2014) in some rare cases. After serving, a tennis player runs for an average of 3 meters per shot and a total of 8 to 15 meters (Fernandez et al, 2014) changing direction 3 to 6 times during a typical rally (Practical on Court Application for Sports science, 2012) in pursuit of one point. A tennis player might hit the ball at an average of 4-5 times and complete 1300 to 3600 meter distance per hour of play, depending on the level the player's level, whether he is an amateur or advanced player, and the court's surface, whether it is slow or fast (Fernandez et al, 2014). In tennis, specific technical skills are the main element of good tennis players such as racket and ball handling skill and stroke techniques (Ulbricht et al, 2013).