THE EFFECTS OF AEROBIC, RESISTANCE, AND COMBINED TRAINING ON BODY COMPOSITION AMONG OVERWEIGHT UiTM STUDENTS

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ABSTRACT

The aim of this study to investigate the effect of aerobic, resistance and combined training on body composition among overweight UiTM students. There are 3 type of training which is aerobic, resistance and combined training. 30 subjects (n=30) were selected and divided into 3 groups and they need to perform 6 weeks training program. The body composition measure that been collected are body mass index, fat mass, muscle mass, and waist hip ratio. After 6 weeks training, the results showed that there are significant differences on body composition such as body mass index, fat mass, muscle mass, and waist hip ratio on these 3 intervention training groups. The results showed that there is a significant difference on body mass index, fat mass, muscle mass, and waist hip ratio on these 3 intervention training groups.

Keywords: *Aerobic training, Resistance training, Combined training, Body Composition, UiTM students*

CHAPTER 1

INTRODUCTION

1.0 BACKGROUND OF STUDY

According to World Health Organization (WHO) (2013), overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A person with a BMI of 30 or more is generally considered obese. On the other hand, WHO (2013) also state that Malaysia is the highest obesity case among Asia country with 14% are obese or overweight. Malaysia's Health Minister Subramaniam Sathasivam warned that the country is facing an obesity epidemic, because over half of the population is either overweight and obese by compare to 20 years ago, just only 4% of Malaysians were considered obese (Schoepp,2017). Besides that, factors that influence people become obese because of a combination of inherited genes and a lifestyle such as of lack involved in physical activity and consumption of too much of calories (National Health and Morbidity Survey (NHMS), (2015). The suitable body weight must be depending on the energy balance which determine how much energy intake and energy expenditure. An individual overweight or obese because the energy expenditure is exceeding more than energy intake. American College of Sports Medicine (ACSM) (2014) state that overweight and obesity are major risk factors of chronic diseases, including diabetes, cardiovascular diseases and cancer. Therefore, there are training methods has been established in improving body composition.

Body composition refers to the percentage of body weight which is fat compared with total lean mass and the measurement assumes which body weight can be divided into lean body weight and fat weight (Edmund and Michael, 2011). Additionally, lean body mass consists all the body nonfat tissue such as skeleton,

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Overweight and obesity refer to body weight that is greater than what is considered normal or healthy for a certain height. Overweight is generally due to extra body fat. However, overweight may also be due to extra muscle, bone, or water. People who have obesity usually have too much body fat. (The National Institute of Diabetes and Digestive and Kidney Diseases, 2018). Overweight can be defined as an excessive fat which BMI are 25.9 – 29.9 kg/m2(WHO,2015).

2.1.2 Aerobic Training

The recent study by Saif and Alsenany (2015). Their study is to compare aerobic exercise in obese adults. The previous study stated that there is a significant decrease in BMI for aerobic group after 8 weeks of training. The other previous study by Willis (2012), to measure the effects of aerobic on body mass and fat mass in overweight or obese adults. After 12 weeks of aerobic training, there is a significant increases in peak VO2 in each exercise group demonstrated the effectiveness of the training stimulus. Body mass significantly decreased in the aerobic. Fat mass and waist circumference significantly decreased in the aerobic training but were not altered in resistance training.