The Effect Of Aerobic Exercise On Body Weight and Body Fat Percentage

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The Effect Of Aerobic Exercise On Body Weight and Body Fat Percentage

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Abstract. Overweight is the accumulation of excessive or abnormal fat that can interfere with health. The right exercise program is very influential in reducing fat levels and body weight of people who are overweight. The writing method starts from problem identification, literacy study, data analysis, building alternative problem solving, and conclusions. Losing fat and weight are common goals for doing aerobics. Aerobic exercise to acutely increase energy and lipid utilization but can increase lean tissue, metabolic rate and thus indirectly aid fat and weight loss. From the results of the review, there is a supervised aerobic exercise program. The results showed an increase in aerobic fitness and body mass index did not always change significantly because muscle mass also increased along with decreasing fat mass. In conclusion, a programmed aerobic exercise program has an effect on the percentage of fat and weight loss.

Keywords: Aerobic, weight lose, overweight.

1 Introduction

Fitness physical is a physical element that affects the appearance of performance. This condition is very dependent on the components of physical and motor fitness. According to (Jasmani, 2017), physical fitness can be interpreted as a physical condition that describes physical fitness or it can also be interpreted as a person's ability to do a certain job well without experiencing significant fatigue. Increasing physical fitness can be done by doing aerobic exercise. Aerobic exercise is an exercise that is done to burn fat while improving muscle tone which is led by an experienced trainer together with music that matches the rhythm / movement of the moving limbs. Power fit members participate in aerobic exercise for weight loss, body fat and increased muscle mass.

This study is based on the results of a review of 12 articles which have been reset sportsman gymnastics aerobic. A person can experience weight gain, this is due to uncontrolled diet / eating patterns, usually after doing lust activities it will increase. Someone who cannot control their diet / fulfillment of unbalanced nutritional intake can cause obesity.

Aerobic exercise is a series of movement activities that predominantly stimulate the metabolic ability, namely cardiovascular. According to (Gusvominesia et al., 2019) the benefits and advantages of aerobic exercise are: 1) the work of the heart is more efficient and it becomes trained, so that the heart does not tire quickly, 2) the blood vessels will get bigger, so that the blood will be smoother than those who untrained, 3) preventing blood clots, 4) the heart will be able to pump more blood and beat more slowly, 5) the lungs will increase in breathing capacity, 6) reduced risk of heart problems, 7) previously high blood pressure will

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decreased regularly, and 8) decreased levels of harmful fats in the blood, and the occurrence of good fat levels that are beneficial in the body. Gymnastics aerobic conducted regularly and helpful programmed to work more efficiently function of organs, especially the heart and lungs.Blood circulation throughout the body, muscles become strong, there will be an increase in muscle mass, a decrease in the percentage of body fat levels.

Body weight is one of the parameters that provides an overview of body mass. Excess body mass in the body will describe being overweight which is known as obesity, which indicates a buildup of body fat that exceeds normal limits in the body. (Ramayulis, 2008) states, "The factors that cause obesity are genetic factors, damage to one part of the brain, excessive eating patterns, lack of movement or lack of exercise, emotional instability, and the environment". Fat is one of the components in the body that functions as the formation of energy for the body to do activities every day. (Lingga, 2012) stated that the function of fat is not only a constituent of body building, but also has quite a variety of functions for the continuation of life. The presence of fat in the body is reflected in the percentage of fat. Body fat percentage is a picture of how much or how much fat is in the body. The percentage of body fat can increase and can decrease the effects of activity and dietary consumption every day. For more details, the percentage of body fat can be seen in the table below:

Table 1. Female body fat percentage.

Age	Body Fat Proposition
<30 yo	14-21%
30-50 yo	15-23%
50-70 yo	16-26%

Based on the above quotation, the presence of body fat percentage and muscle mass will describe body weight. Excess body fat will have an impact on being overweight. To overcome the balance of body fat and body mass against body weight, it can be neutralized by doing sports exercises, one of which is through aerobic exercise. There is an effect of physical activity (aerobic exercise) in the intervention group on weight loss (Pratiwi & Basri, 2018). Aerobic exercise with low to moderate intensity, namely 50% -80% of the maximum pulse is a measure in providing training load. Exercises that last for 15 minutes to 1 hour are the limits the body performs exercise in effect on the improvement of the organism's system an increase in the physiological function of the body so that it works optimally (Indah, 2016) It means that doing aerobic exercise can lose weight. During aerobic exercise, excess fat in the body will be used as a source of energy. The more often people who have excess levels of fat in their body do aerobic exercise, the more optimal the burning of fat in the body will be. The results showed that aerobic exercise was proven to reduce body weight by 66, 78%, body fat percent by 86, 42% (Utomo, 2012). That way, aerobic exercise can reduce body fat levels.

2 Method

A total of 12 articles were used as data in this review article. The data used in this article are secondary data. Secondary data were obtained from articles published in recent years on the topic of the effect of aerobics on weight loss and body fat. These articles were obtained from various library sources such as Google Scholar, Springerlink, Garuda.id and so on. The analysis used in this literature review includes four steps that must be carried out sequentially

to provide acceptable answers to the research question. 1) Stages of searching and collecting material on the effects of aerobics for weight loss and body fat; 2) Stage of reduction and coding, screening and classification of material according to the topic of discussion; 3) The analysis and synthesis stage, examining and digging up detailed information about the material obtained; 4) The conclusions presentation stage is the final stage of the article review process and to state the novelty of the research. The re view process can be seen in the schematic in this section:

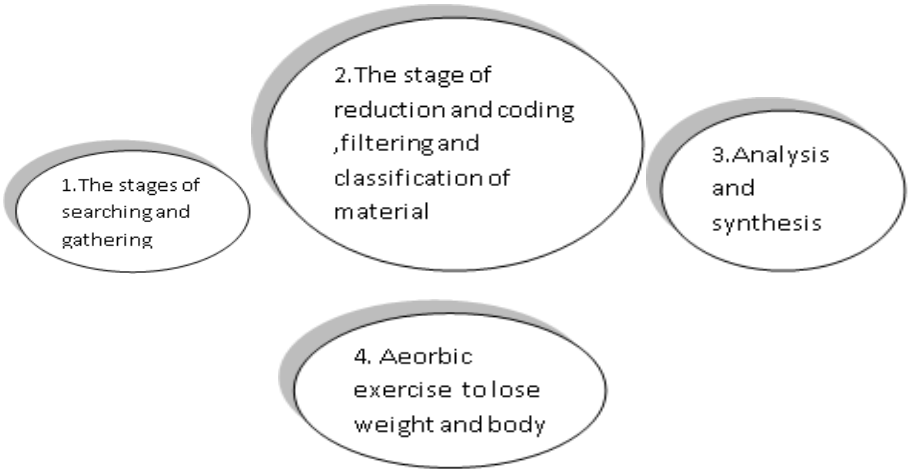

Fig. 1. Schematic Process.

3 Result and Discussion

3.1 Effect of aerobic exercise on weight loss

Pretest and posttest data The effect of aerobic exercise on weight loss is taken from a review of data on Fit Clup members in the following table:

Table 2. Frequency distribution of pretest and postest data effect of aerobic exercise on weight.

Interval class	Pre test		Post test	
	Frequence			
	Absolute	Relatively	Absolute	Relatively
> 80.33	1	10	1	10
71.10-80.33	1	10	1	10
61.88-71.10	4	40	4	40
52.65-61.88	4	40	4	40
<52.65	0	0	0	0
amount	10	100	10	100

Based on the table above, the pre-test data obtained with the highest weight of 86, 30 kg, the lowest weight of 56, 30 kg with an average weight of 66, 86 kg. While the post test data with the highest weight was 84, 90 kg, the lowest weight was 55, 30 kg with an average

weight of 66.12 kg. In conclusion, the effect of aerobic exercise on weight loss in Fit Clup members is moderate and less.

3.2 Effect of Aerobic Exercise on Decreasing Body Fat Percentage

The pretest and posttest data on the effect of aerobic exercise on decreasing the percentage of body fat in Fit Clup members are in the following table 2.

Based on the table above, the pre-test data was obtained with the highest body fat percentage of 45.50, the lowest body fat percentage of 35.60 with an average body fat percentage of 40.45. Meanwhile, the post-test data with the highest body fat percentage was 42.90 , the lowest body fat percentage of 31.90 with an average body fat percentage of 37. 18. In conclusion, the effect of aerobic exercise on the percentage of body fat in Fit Clup members is moderate and less.

Based on the results of the pretest and posttest data research, the results of the data analysis are presented in the table below:

Table 3. Frequency distribution of pretest and postest data effect of aerobic exercise on weight.

Information	Mean			Significant level	T_{table}	T_{count}	Information
	Pretest	Post test	Difference				
Body Weight	66.86	66.12	0.74	5%	1,812	2,186	significant
Body fat	40.45	37.18	3.27	5%	1,812	3,285	significant

Exercise on Increasing Muscle Mass

In the implementation of the review to get the data facts, namely the need research data preliminary tests. This initial test aims to see a decrease in body weight, and a decrease in the percentage of body fat in members of aerobic exercise.

3.3 Aerobic Exercise Has an Effect on Weight Loss

In the post test results of aerobic exercise are weight loss, from an average score of 66, 86 kg pre-test to 66, 12 kg in the post test with a difference of 0, 74. The occurrence of weight loss caused by exercise aerobics Results of research indicates that $t_{h\ itung}$ (2186)> t_{table} (2 186). This means that the research hypothesis can be accepted. Thus it can be interpreted that aerobic exercise has a significant effect on the weight of the members of the Fit Clu p . For weight loss with aerobic exercise, movements that are carried out have a light impact and do not have jumps in doing movements. So that exercise has an effect on weight loss, another advantage of aerobic exercise is that it can be used for all ages, both school age and old age. (D. Supariasa, I Dewa Nyoman, 2002) states that "Weight is one of the parameters that provides an overview of body mass. According to Irianto (2007: 155) "Being overweight above 25% of the ideal body weight is called obesity. (Septiyadi, 2004) "A person weighing 20% of the ideal body weight is generally categorized as obese (general standard: height minus 110)". Body weight can increase and can decrease with aerobic exercise. Exercise is a sport activity systematically over a long period of time, progressively and individually which leads to functional and psychological characteristics of humans to achieve predetermined goals. Aerobics sebagaiman a described above that a series of motion selected intentionally by following the rhythm of music that gave birth to the rhythmic strength, continuity and a

certain duration. From the description above, it can be argued that exercising helps to lose weight for members who take exercise seriously and regularly.

3.4 Aerobic Exercise has an Effect on Decreasing Body Fat Percentage

In the post test results of aerobic exercise, there is a percentage of body fat, from an average score of 40.45% in the pre test to 37.18% in the post test with a difference of 23.27%. This decrease in body fat percentage is caused by aerobic exercise. The results showed that t count (3.285)> t table (1.812). This means that the research hypothesis can be accepted. Thus it can be interpreted that aerobic exercise has a significant effect on the body fat percentage of members of the Fit Clu p . A decrease in the percentage of body fat according to (Eka Novita Indra, 2016) aerobic activity which has a big influence on body fat is all forms of aerobic activity carried out at low to moderate intensity. Aerobic activity will lead to weight loss due to a decrease in body fat percentage. The decrease in body fat percentage was seen after doing 16 exercises. Therefore, a regular and continuous training program duration and training is an important requirement for the success of an exercise program. The frequency of aerobic exercise that is done $\geq$ 3 times a week has a significant effect on decreasing the percentage of body fat. This is because fat metabolism is working properly. If the frequency of exercise is carried out three times a week, the rest period is one day and the next day you have done the exercise, it means that the stored fat in the body does not accumulate too much and will not become fat deposits in the body, because the fat will be processed immediately through burning fat in the body. during practice. Exercise causes an adaptation process in the body's organs. If the frequency of exercise is done 3-5 times a week, it means that the organs of the body will often receive stimulation or load from training so that the adaptation process will be influenced more quickly. This is because, during training, there will be an adaptation process in the body. If the frequency of exercise is increased, the organs of the body will adapt well to these changes. But the body needs time to rest so that the body can adapt to all the loads during the training process. In contrast, the frequency of aerobic exercise that is done $\leq$ 2 times a week does not have a significant effect on decreasing body fat percentage. This is because, with a long training distance and the increase in the amount of fat obtained from food intake for days, it will cause fat to accumulate a lot and for a long time, without any reduction in fat by the burning process. When training returns, the body will metabolize fat with a certain capacity and cannot burn all the fat that has been accumulated. Fat burning that occurs does not have a significant effect on decreasing the percentage of body fat if the frequency of aerobic exercise is only done 1-2 times a week. In other words, if you only do the exercise two days per week, the results are only slightly better than not doing the exercise. Thus the frequency of exercise also determines the effect of decreasing the percentage of fat. It can be concluded that aerobic exercise that is carried out in a programmed, structured manner with intensity, frequency, and duration settings will have a major effect on decreasing the percentage of body fat.

4 Conclusion

Based on the data analysis and discussion that has been previously described, several conclusions can be made as follows: (1) Aerobic exercise has a significant effect on weight loss t count 2.186> t table 1. 782. The average pretest value is 66, 86 kg and posttest 66, 12

kg. There was a decrease of 0.74 kg. (2) Aerobic exercise had a significant effect on decreasing the percentage of body fat t count 3, 285> t table 1. 782. The average pretest score was 40. 45% and posttest 37, 18%, there was a decrease of 3.27% . So aerobic exercise has an influence on the percentage of weight loss and body fat.

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