The Effect of Aerobic Exercise Models and Sports Motivation on Decreasing the Body Fat Procentage

Iwan Setiawan[1✉], Sandey Tantra Paramitha[2]

Universitas Negeri Jakarta, Indonesia[1]
Universitas Pendidikan Indonesia, Indonesia[2]

Abstract

The purpose of this study was to determine the effect of low impact aerobic exercise training models, and bench models also exercise motivation on decreasing percentage of body fat. This research was conducted at one of the fitness centers in Jakarta. This research is planned to take place for three months with activities covering the testing of research instruments, initial data collection for sample grouping, experimentation and final data collection. This study uses an experimental method with a simple 2 X 2 factorial design. After the data collection is done, based on the data obtained, the results of hypothesis testing and discussion of research results can be summarized as follows: 1) there are significant differences between low impact aerobics models and bench models against decrease in percentage of body fat, bench training model is better than low impact training on decreasing percentage of body fat; 2) there is a difference in the decrease in body fat percentage between bench exercise models and low impact exercises for high-motivated sports groups. In other words, members who have high sports motivation tend to use the exercise bench model; 3) Members who have low sports motivation tend to use the low impact exercise model better than the bench exercise model in decreasing the percentage of body fat; 4) There is an interaction between the exercise model and exercise motivation to decrease the percentage of body fat.

How to Cite

✉ Correspondence address :
  E-mail: iwansport53@yahoo.com / sandeytantra18@upi.edu

INTRODUCTION

The rapid development of science and technology (kaonedarman, 2014) is characterized by the creation of sophisticated equipment such as cars, motorcycles, elevators, washing machines and so on. All equipment was created to facilitate human activities (Ariyati & Misriati, 2016). This development brings changes to the behavior and lifestyle of a modern society (Setiawan, 2017). Another thing is that modern society is not really aware of a good and healthy diet (Paramitha, 2018). During this time the community only knows the four healthy five perfect eating patterns, but they do not know how to regulate the composition of food menu containing nutrients eaten in their daily lives (Paramitha & Anggara, 2018), and the possibility of excess percentage of body fat.

For example, if the composition of fat in the body exceeds 25% in women, then that person will experience excess fat, and he could be overweight. So the process of decreasing the percentage of body fat is closely related to weight loss (Angels, 2013). Usually a fat body describes a fatty person or has a high percentage of fat. In addition to sports, of course, it is also required to maintain a diet so that it can limit the number of calories and fat that enters the body, so that programs carried out to reduce the percentage of fat will be more effective.

Seeing the phenomenon, not a few modern people are willing to spend enough money to keep them healthy, keep their weight normal and avoid various diseases, namely by going to fitness places. In the Fitness Center, heart fitness equipment is provided. such as treadmills, cross trainer, static bikes and stepper, weight training and aerobic exercise models such as: aerobics impact exercises, combination aerobics exercises, high aerobics exercises, yoga, bench or step exercises, body shape and body shape.

According to (Bompa & Bucur, 2016) exercise is a systematic exercise movement in a long time, progressively and individually improved which leads to human physiological characteristics to achieve predetermined goals. Looking at its function, (Thygesen et al., 2019) says exercise can function as a program of physical or physical activity designed to improve some skills and increase one's energy capacity for special activities. Good exercise is an exercise that is in accordance with the principles of practice that apply, and pay attention to several factors that become a handle, so as not to deviate from the goals to be achieved and avoid a futile effort. The training factors that need to be considered include: 1) frequency, 2) intensity, 3) tempo and 4) type and sequence types

(Ditya & Rumini, 2016).

Many aerobic exercise models include: aerobics low impact models and aerobic exercise bench. Both of these gymnastic models are of course aerobic activities, namely activities that require a lot of oxygen for a long time. According to (Espí-López, Inglés, Ruescas-Nicolau, & Moreno-Segura, 2016), aerobics low impact, which is aerobic exercise carried out with low impact where one leg is still resting on the floor. Performed with varied steps and combined with modern dance without running, jogging and jumping. Whereas (Lamberti et al., 2017) defines: Aerobics impact is low impact movements that require a foot that is always on the floor every time.

The definition of bench gymnastics in opinion, C. K Gaim and K. C Tea is: up-down bench or bench can be considered as aerobic activity, because it requires rhythmic contributions from large muscle groups of the limbs that move all body weight. According to Nancy Burstein said that: as aerobic activity, bench gymnastics are ideal fat burners. Fat is a fuel source in the body for endurance training. Up and down bench combined with low impact movement of high energy use (because you move both vertically and horizontally on the bench and use the upper body), increase the training load on the body and burn body fat.

According to (Smp, 2015) provides an explanation that motivation is the strength or driving force for someone to behave. So in terms of someone's motivation is interpreted as the strength or driving force of the person in carrying out activities or appearing. Motivation or mental impulse refers to: (1) Why do people choose to do certain activities and not other activities. (2) Why do people do a task more actively. (3) Why do people want to diligently and persistently do something for a long time.

By various kinds of exercising impulses arise to act as well as possible which is part of the drive to develop yourself. According to (Romadhon Sandi Akbar & Rustiadi Tri, 2016) argues that motivation to exercise varies between individuals with one another because of differences in needs and interests, both due to differences in the level of development of age, interests, work and other needs. Motivation to exercise for children, adolescents, and parents who do not prepare for competition but for other purposes include: (1) To be able to have fun and get fun. (2) To release psychological tension. (3) To get an aesthetic experience. (4) To be able to connect with other people (find friends). (5) For the benefit of group pride. (6) To maintain a healthy body. (7) For the needs of practical needs according to their work.

METHODS

The purpose of this study was to determine the effect of aerobic exercise training models and exercise motivation on decreasing body fat. This research was conducted at the Fitness Center, Jl. Heroes of Revolution, East Jakarta. The time of this research is planned to last for three months with activities including trial of research instruments, initial data collection for sample grouping, experimentation and final data collection.

Specifically, the implementation of the experiment lasts eight weeks with three meetings each week. This study uses an experimental method with a simple 2 X factorial design 2. Design designation refers to opinions (Latuconsina, 2018), that is, experimental units are grouped in such a way that experimental units in the cell are equal to the many treatments being studied. The research variables consisted of two independent variables, namely: (1) Aerobicslow impact exercise model and (2) Benchmark exercise exercise model, one categorical variable with two levels namely high motivation and low motivation and one dependent variable is a decrease in percentage of body fat.

RESULTS AND DISCUSSION

The result of a decrease in the percentage of body fat given bench exercise model

The result of a decrease in body fat percentage for members given a bench exercise model can be described as follows. Many respondents (n) = 20, minimum score = 19.5, maximum score = 30.9, with a range = 11.4; then the data is presented in the form of a frequency distribution Table 1 with many classes = 6, interval width = 2, average = 25.7, standard deviation = 3.166. The presentation of data in the form of a frequency distribution Tabel 1 is as follows:

Tabel 1. Frequency distribution decreases percentage of body fat given bench exercise model

Interval Class	f Absolut	f Relatif	f Kumulatif
19,5 - 21,4	3	15	15
21,5 - 23,4	2	10	25
23,5 - 25,4	3	15	40
25,5 - 27,4	5	25	65
27,5 - 29,4	4	20	85
29,5 - 31,4	3	15	100
Total	20	100	

From the Tabel 1 above indicates that the data has a normal distribution. Furthermore,

from the frequency distribution it can be seen that the members who get scores on the average group are as many as 5 people (25%), members who get scores above the average group of 8 people (40%), and members who get the score below the average group is 7 people (35%).

Training bench for members who are highly motivated sports

The results of the reduction in percentage of body fat given the exercise bench model for highly motivated members of the sport can be presented as follows. Many respondents (n) = 10, minimum score = 19.5, maximum score = 28.2, with ranges = 8.7; then the data is presented in the form of a frequency distribution Table 2 with many classes = 5, interval width = 2, average = 23.8, standard deviation = 2.91. The presentation of data in the form of a frequency distribution Table 2 is as follows.

Table 2. Frequency distribution of decreased results Percentage of body fat given bench training for highly motivated sports members

Interval Class	f Absolut	f Relatif	f Kumulatif
23,4 - 25,3	3	15	15
25,4 - 27,3	8	40	55
27,4 - 29,3	4	20	75
29,5 - 31,3	4	20	95
31,4 - 33,3	1	5	100
Total	20	100	

From the Table 2 above indicates that the data has a normal distribution. Furthermore, from the frequency distribution it can be seen that the members who get the score in the average group are as many as 8 people (40%), members who score above the average group are 3 people (15%), and members who get the score below the average group is 9 people (45%).

Decrease results in percentage of body fat given exercise bench for members who are highly motivated sports

The results of the reduction in percentage of body fat given the exercise bench model for highly motivated members of the sport can be presented as follows. Many respondents (n) = 10, minimum score = 19.5, maximum score = 28.2, with ranges = 8.7; then the data is presented in the form of a frequency distribution Table 3 with many classes = 5, interval width = 2, average = 23.8, standard deviation = 2.91. The presentation of data in the form of a frequency distribution Table 3 is as follows.

Table 3. Frequency distribution of decreased results Percentage of body fat given bench training for highly motivated sports members

Interval Class	f Absolut	f Relatif	f Kumulatif
19,5 - 21,4	3	30	30
21,5 - 23,4	2	20	50
23,5 - 25,4	2	20	70
25,5 - 27,4	2	20	90
27,5 - 29,4	1	10	100
Total	**10**	**100**	

From the **Table 3** above indicates that the data has a normal distribution. Furthermore, from the frequency distribution it can be seen that the members who get scores on the average group are as many as 2 people (20%), members who get scores above the average group of 5 people (50%), and members who score below the average group is 3 people (50%).

Decreased results Percentage of body fat given bench training for members who have low sports motivation

The results of the reduction in percentage of body fat given the exercise bench model for members who have low sports motivation, can be explained as follows. Many respondents (n) = 10, minimum score = 24.4, maximum score = 30.5, with a range = 6.1; then the data is presented in the form of a frequency distribution **Table 4** with many classes = 4, interval width = 2, average = 27.7, standard deviation = 2.01. The presentation of data in the form of a frequency distribution **Table 4** is as follows:

Table 4. Frequency distribution of decreases in percentage of body fat given bench training for low motivated members

Interval Class	f Absolut	f Relatif	f Kumulatif
24,4 - 26,3	3	30	30
26,4 - 28,3	3	30	60
28,4 - 30,3	3	30	90
30,4 - 32,3	1	10	100
Total	**10**	**100**	

From the **Table 4** above indicates that the data has a normal distribution. Furthermore, from the frequency distribution it can be seen that the members who get the score in the average group are as many as 3 people (30%), members who score above the average group are 3 people (30%), and members who get the score below the average group is 4 people (40%).

Results of decreased percentage of body fat given low impact training

The results of the decrease in body fat percentage for members given a low impact training model for members who are highly motivated sports can be presented as follows. Many respondents (n) = 10, minimum scores = 24.1, maximum scores = 31.4, with ranges = 7.3; then the data is presented in the form of a frequency distribution **Table 5** with many classes = 4, interval width = 2, average = 27.79, standard deviation = 2.44. The presentation of data in the form of a frequency distribution **Table 5** is as follows.

Table 5. Results of decreased percentage of body fat given low impact training for members who are highly motivated

Interval Class	f Absolut	f Relatif	f Kumulatif
24,1 - 26	3	30	30
26,1 - 28	2	20	50
28,1 - 30	3	30	80
30,1 - 32	2	20	100
Total	**10**	**100**	

From the **Table 5** above indicates that the data has a normal distribution. Furthermore, from the frequency distribution it can be seen that the members who get scores on the average group are as many as 2 people (20%), members who get scores above the average group of 5 people (50%), and members who score below the average group is 3 people (30%).

Results of the reduction in percentage of body fat given low impact training for members who have low sports motivation

The results of the decrease in body fat percentage for members who are given a low impact training model for members who have low sports motivation can be explained as follows. Many respondents (n) = 10, minimum score = 24.5, maximum score = 29.9, with a range = 5.4; then the data is presented in the form of a frequency distribution **Table 6** with many classes = 4, interval width = 2, average = 26.91, standard deviation = 1.62. The presentation of data in the form of a frequency distribution **Table 6** is as follows.

From the **Table 6** above indicates that the data has a normal distribution. Furthermore, from the frequency distribution it can be seen that the members who get the score in the average group are as many as 3 people (30%), members who score above the average group are 5 people (50%), and members who get the score below the average group is 2 people (20%).

Table 6. Results of a decrease in percentage of body fat given low impact training for members who have low sports motivation

Interval Class	f Absolut	f Relatif	f Kumu-latif
24,5 - 26,4	5	50	50
26,5 - 28,4	3	30	80
28,5 - 30,4	2	20	100
30,5 - 32,4	0	0	100
Total	**10**	**100**	

CONCLUSION

Based on the data obtained, the results of testing the hypothesis and discussing the results of the study can be summarized as follows:

Overall the bench training model is better than the low impact training model for decreasing body fat percentage in members at the Pioneer Fitness Center, Jl. Pahlawan Revolusi, East Jakarta Jakarta.

For members who have high exercise motivation after being trained with bench training models, it is better than members who are trained with a low impact training model to decrease the percentage of body fat in members at the Pioneer Fitness Center, Jl. Pahlawan Revolusi, East Jakarta.

For members who have low exercise motivation after being trained with bench exercise models, it is better than members who are trained with low impact training models to decrease body fat percentage in members at the Pioneer Fitness Center, Jl. Pahlawan Revolusi, East Jakarta.

There is an interaction between the exercise model and exercise motivation against the reduction in percentage of body fat in members at the Pioneer Fitness Center, Jl. Pahlawan Revolusi, East Jakarta.

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