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The Effect of Body Language Gymnastics on the Decrease in Visceral Fat Members of Pingky Pegandon Gymnastics

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Abstract

The accumulation of a lot of fat in the body, because more calories are taken in than expended, is a condition where the body is obese or overweight, and this condition can lead to an increased risk of many diseases. The problem in this study is the lack of physical activity in female members of the Pegandon pinky gymnastics, which results in obesity or a large amount of fat throughout the body. The purpose of this study was to determine the effect of body language exercise on reducing visceral fat in Pingky gymnastics members. This type of research is quantitative with an experimental method using a one-group pretest-posttest research design. The instrument in this study uses BIA (Bioelectrical Impedance Analysis). The research population was members of the Pingky Pegandon Kendal Gymnastics, with a total sample of 22 people. Data analysis used the Prerequisite analysis test in the form of the Shapiro Wilk Normality Test and continued with a different test using the Wilcoxson test calculated using SPSS. The conclusion is that there is an effect of gymnastic body language on reducing visceral fat in Pingky Pegandon Kendal Gymnastics members. Suggestions for maximum results must be consistent and practice at least twice weekly. In addition, you must pay attention to the intake of food eaten by making a checklist of foods eaten for control and also adequate rest so that the body remains in good condition and avoids excess fat in the body.

How to Cite

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INTRODUCTION

The types of sports are varied, including sports that use tools or sports without using tools and also group or team sports or individual or individual sports. By doing regular exercise activities, we can avoid diseases, including obesity. In Indonesia, sport is a part of the nation›s achievements that can grow and develop in line with current developments (Santoso, 2016). There are many principles in training when the coach or instructor must have a training program arranged according to the athlete. There are several basic principles of the training program that need to be considered, namely: the principle of overload, the principle of increased load, the principle of sequential training, the principle of specificity, the individual principle, the principle of recovery, the principle of reversibility and the principle of variation (Bafirman & Wahyuri, 2018). In addition to consistent training, athletes must also be balanced by maintaining a diet by consuming a balanced diet.

For those who are not athletes or maybe make sports a hobby and healthy endeavor, our bodies will also train their muscles, and blood and oxygen circulation in our bodies becomes smoother so that the metabolism in the body can work optimally. In addition to exercising regularly, we must maintain our health by controlling nutritional intake or a balanced diet, getting enough rest, and doing regular exercise. This has been proven to be healthy for the body. According to (Fuad, 2016), there are four activities that we can do and must pay attention to in maintaining a healthy body, namely 1) Eat healthy food and reduce ready-to-eat or instant food, 2) Drink plenty of water every day, 3) Get enough sleep and don›t stay up late, 4) Increase physical activity such as exercising regularly. We also have to consume more vegetables such as broccoli, green beans, and spinach, because these vegetables contain lots of fiber and can reduce sugar (Najeeb et al., 2016). Everyone has a different level of calorie and nutritional needs, so it must be paid close attention. A person›s nutritional status will show how much the physiological needs the individual needs have been fulfilled (Dodik B, Widya L, 2020). Emergency according to (Santoso, 2016) body health is a state of the body that is balanced, dynamic, this is influenced by genetic factors, the environment and daily lifestyle such as eating, drinking, sex, work, rest, so that you can manage your own emotions.

Indonesia has been hit by the Covid-19 virus for more than two years. Covid-19 is a virus that attacks the acute respiratory system and attacks the human immune system. Covid-19 first originated in Wuhan, Hubei Province, China since early December 2019, this virus caused several deaths (Maulida et al., 2020). Fitness can be classified into 4 types (Listyarini, 2015) namely physical fitness or physical fitness (physical fitness) which means a person can be productive in carrying out daily physical activities without feeling excessive fatigue in body.

Aerobic gymnastics according to (Listyarini, 2015) is an activity (movement) that is carried out rhythmically involving large muscles, as well as the use of energy and oxygen systems that can be done alone or in groups that aim to improve and maintain body fitness. Aerobics is one of the sports of choice for many people because it has many benefits such as being able to lose weight and shrink the stomach. Aerobics is one of the physical sports activities that has many benefits, including aiming to train the heart muscle so that it can work properly for a long time (Karlina Dwijayanti, 2016). Currently aerobic exercise is one of the choices for community recreational sports which is very popular at all age levels in society (Darmawan, 2013).

According to (Damayanti, Aulia Fitri Hasibuan, 2014) gymnastics is a sport that involves physical activity that is more effective and functions to optimize the components of growth and development of components of physical fitness such as components of strength and components of body muscle endurance. According to (Dwijayanti & Ferbrianti, 2021) Aerobic exercise is a physical activity that is carried out in an arranged and systematic manner that requires oxygen to achieve the desired goals.

Is a type of exercise that is often done by many people in general such as SKJ gymnastics, aerobic exercises, healthy heart exercises, pregnant women exercises, rhythmic gymnastics and others. From some of the definitions above, it can be concluded that aerobics is a sports activity that requires oxygen which is carried out using a series of movements that are arranged systematically, patterned or not patterned accompanied by musical rhythms, which can be done individually or in groups. Just like in the Pingky Pegandon gymnastics group, the gymnastics that Pinggi Pegandon members like the most is body language gymnastics.

The women in the Piky Pegandon gymnastics usually do gymnastics approximately 3-4 times a week. The goal of women to exercise regularly is that apart from maintaining health it is also to shape their body so that it looks

better because an attractive appearance will make us more confident besides that there is also to lose weight so that we look slimmer and ideal. According to (Faridah, 2009: 7) quoted by (Anjani, 2015) Body language exercises can burn calories and fat in the body with the aim of forming a more ideal and better body. Body language gymnastics has many benefits for our bodies if it is done consistently and routinely three times a week according to the portion, the movements must also be carried out with the correct technique in accordance with the directions of the guide or instructor and if there are members who do not complete the movements it will be justified by instructor.

The human body has two compositions, namely fat mass and non-fat mass (fat free mass). The figure shows the composition of the human body non-fat mass (FFM) consisting of 20% protein mass (skeletal muscle and non-skeletal muscle), 7% bone minerals, and approximately 73.8% body fluids and has a density of 1.1 g/cm. and fat mass (Muthouwali et al., 2017). Percent body fat is the amount of excess fat stored in our bodies, which can be measured using several methods including BMI, Dual Energy X-ray Absorbtiometry (DXA Scan), Bioelectrical Impedance Analysis (BIA) a tool that compares total body fat to body weight and measurement results are expressed as a percentage (%), Skinfold caliper measuring the thickness of subcutaneous adipose tissue in certain locations, ultrasound, and others (Wijayanti et al., 2018).

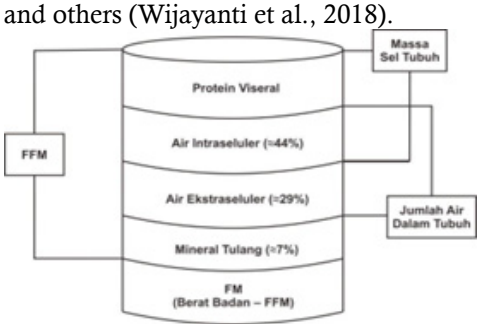

Figure 1 Composition of the Human Body
Source: (Muthouwali et al., 2017)

One of the methods used to determine the value of body fat percentage (Body Fat – BF) is the result of an experiment conducted by (Nurtsani et al., 2019). Based on the excessive distribution of fat in the body, obesity is divided into two categories, namely the android type (apple type) which is obesity that looks like an apple and gynoid type obesity (pear type) which is likened to a pear shape (Putri, 2018). According to (Prashida, 2017) Abdominal fat is a condition that often occurs, namely the accumulation of fat in adipose tissue which is located under the surface of the abdominal skin or hypodermis. Visceral fat or a distended stomach has become a big problem for everyone, especially mothers. The application of proper exercise in the process of reducing body fat percentage and also visceral fat will also provide many benefits, especially if done regularly and consistently.

Visceral fat is active fat that accumulates in the abdominal cavity around the organs and can affect organ function and hormones, so the higher the visceral fat, the greater the risk of developing degenerative diseases, insulin resistance and heart disease (Permana, 2023). Abdominal fat can consist of several different anatomical depots, namely: subcutaneous fat, which is fat that can be divided into anterior and posterior or superficial and deep layers, and intra-abdominal fat, which can be divided (Klein et al., 2004). Visceral fat is fat that is in the body which is located in the abdominal area and is very dangerous because it will easily cause various kinds of health problems in a person›s body. Being able to reduce the amount of visceral fat mass is very desirable for all of these things because central or visceral obesity is strongly associated with the highest risk of death and many obesity comorbidities (Liu et al., 2013)

Table 1. Visceral Fat Norms according to WHO

Visceral Fat Levels	Classification
0,5 – 9.6	0 (Normal)
10 – 14.5	+ (Highr)
15 – 30	++ (very high)

Source : (Permana, 2023)

From the **Table 1** above, we can see that visceral fat in a person›s body belongs to three categories, namely the normal category with a visceral fat level of 0.5 – 9.6, the high category with a visceral level of 10 – 14.5 and the last category, which is very high with a high level of fat. visceral 15 – 30. Lipid or fat is a substance that is appropriate as a temporary storage source of energy, which has an important role for the body as a fuel reserve for the body, when our body is experiencing a lack of oxygen which occurs because fat has relatively light muscle mass and occupies a smaller volume. for the caloric content of the same chemical energy when compared to carbohydrates and proteins. (Fawcet in Hartini, 2012).

From the results of measurements using a body measuring instrument (Fat Caliper), around 20 people experienced excess body fat percentage, namely above 30%, and the majority experienced a distended stomach due to the effects of pregnancy,

while from the interview results there were only a few additional complaints related to complaints that are sometimes felt by some members. when interviewed, there were complaints such as loss of self-confidence due to excess body weight, and some members felt that their bodies felt heavy and also sometimes had frequent aches. From the questionnaire, the majority of mothers chose building exercises using body language which they considered more enjoyable compared to Tabata and also Aerobics. From the phenomena that occur above, the authors are interested in researching the effectiveness of Body Language Gymnastics on Visceral Decline in Pingky Pegandon Gymnastics members. It is hoped that every member of Pingky›s gymnastics can maintain their health by continuing to exercise regularly and maintain a balanced diet.

METHOD

This type of research is a "Pre-Experimental Design" research, namely research that uses a one-group design pre-test and post-test conducted in one group and without using a comparison group. Observations in using this design were carried out twice in the study, namely before the experiment and after the experiment.

The research design image used above has the meaning that (X) is the treatment given, namely body language gymnastics (O1) is the pretest value of the sample before being given treatment, (O2) is the posttest value after being given the treatment, namely body language gymnastics exercises, and (O2) – O1) is the effect that occurs from the effect of the treatment.

The population in this study were all members of the Pegandon Kendal pinky gymnastics, the majority of whom were 30-55 years old, totaling 22 people.

This research was conducted at the Pinky gymnastics studio in the Pegandon sub-district and body language exercises were carried out three weeks every Tuesday, Thursday and Saturday. This research was conducted for 4 weeks, the training program started from January 2, 2023 to January 27, 2023 with a training frequency of 12 meetings.

(Yusup et al., 2018) Reveals that the research instrument is a tool used to collect research data or measure the research object of a research variable aimed at facilitating the processing of research data. The research instrument in this study was to use the BIA (Bioelectrical Impedance Analysis) tool.

Figure 2. Body Position When Measurement using the BIA tool

Data processing techniques and data analysis in this study used quantitative data obtained in the form of numbers from the field, by calculating the results of the visceral fat of the Pegandon pinky gymnastics members. In this study, researchers used computerized calculation techniques, namely SPSS (Statistical Product and Service Solution), because using this program makes work easier because this program has quite high statistical analysis capabilities, as well as a data management system in a graphical environment using descriptive menus. and simple dialog boxes, so that the way of operation can be easily understood, Sugianto in (Sofyan, 2015). This research focuses only on some variables through statistics and by using the formula t-test or t test and paired sample t-test with the help of SPSS (Riduwan, 2011).

RESULTS AND DISCUSSION

Based on the table below it can be seen that there is an effect of body language gymnastics on reducing visceral fat in Pegandon's pinkie gymnastics members. The results of the calculations from this study have been processed using descriptive statistics to determine the average value (mean), standard deviation (standard deviation), maximum value (highest value) and minimum value (lowest value). We can understand that the results of the data measurement are as follows: the number of samples in the pretest data = 22 people, the mean value = 13.1, the standard deviation value = 5.6505, the maximum value = 25.5 and the minimum value = 7.0. Whereas for the posttest data with the same sample, namely = 22 people, the mean value = 12.5, with a standard deviation value = 58,565, the maximum value = 24.5 and the minimum value = 7.0.

Table 2. Pretest and Posttest Visceral Fat

Kategori	Pre Test	Post Test
Mean	13.1	12.5
Max	25.5	24.5
Min	7.0	7.0
St. Dev	5.6505	5.8565

From these results it can be seen that 19 gymnastic members experienced a decrease in visceral fat in the normal and height categories and 3 members did not experience changes or were still the same and were included in the normal category. After calculating statistical data, it can be continued with hypothesis testing. The data hypothesis test can be carried out after carrying out the prerequisite test first, namely the normality test, because the data normality test is an initial test that aims to be able to determine the results of whether the hypothesis will be carried out using parametric statistical tests or carried out with non-parametric ones. The following are the steps for the normality and homogeneity tests to be carried out.

The data normality test is used to determine whether the data used is normally distributed or not. This normality test is a mandatory requirement that must be carried out before proceeding with the hypothesis test. The normality test of the test data uses the Shapiro-Wilk with several provisions, namely the data can be said to be normally distributed if the probability or significance value is > 0.05 and the data is not normally distributed if the significance or probability value is <0.05. The data normality test in this study used Shapiro Wilk. The data obtained a significance value in the pretest results of 0.001 <0.05, meaning that the pretest data were not normally distributed. While the significance value in the posttest results is 0.000 <0.05 which means that the data in the posttest is also not normally distributed. So it can be explained that the results of the pretest and posttest data of all variables in this study are not normally distributed. So that in processing the test data that must be used for the next is the Wilcoxon test because the data is distributed <0.05. After carrying out the Wilcoxon test, a significant value of 0.000 <0.05 was obtained, then H0 (Null Hypothesis) was rejected and H1 (Alternative Hypothesis) was accepted. This means that there is a significant effect of body language gymnastic exercises on decreasing the percentage of visceral fat members of the Pegandon pinky gymnastics, Kendal Regency.

The dangerous condition of excessive or abnormal fat in the human body which has many negative impacts on human health is called obesity. This will be very easy to potentially happen to housewives, there are many contributing factors one of which is the occurrence of an imbalance in calorie intake and calorie expenditure in the body, therefore to be able to reduce and prevent an increase in visceral fat it is necessary to have exercise activities such as the body language of this exercise. In this body language gymnastics exercise, it is necessary to have intensity exercises carried out at regular intervals and carry out exercises a maximum of 3 times a week.

This study aims to determine the effect of exercise body language on reducing visceral fat in members of the Pingky Pegandon Kendal gymnastics. In this study, the body language exercises were given to members of the Pingky Pegandon Kendal gymnastics, amounting to 22 cents, consisting of the majority of housewives. Data measurement in this study used the BIA (Bioelectrical Impedance Analysis) measuring instrument which was carried out twice, namely before and after being given treatment or treatment. The administration of treatment or medication is carried out for 12 meetings which are held 3 times a week in order to find out the effect of the body language exercise. Body fat in the members of the Pingky Pegandon gymnastics from the entire sample belongs to several categories, fat in the abdomen posttest results after being given body language gymnastic exercises has decreased, namely there are 40.9% of the members belonging to the normal category, 36.3% of the members belonging to the high category, and there are 22.7% of members belonging to the very high category.

This is in line with research conducted by (Risman, 2019) before being given the body language exercise treatment, the mean was obtained 34.3482 and after being given the treatment, the mean was 27.2273, so it can be concluded that there was a significant effect in the body language exercise treatment group on reducing abdominal fat between before and after treatment. After the treatment, 19 members experienced a decrease in visceral fat and 3 people did not experience a change.

The importance of doing warm-up exercises before doing core exercises, because warming up has very good benefits including being able to prevent injuries and can prepare our bodies so it is highly recommended to warm up before doing core movements, this is in accordance with the opinion of Giriwijoyo (2007: 154) cited by (Fuad, 2016) states that, "Warm-up is intended to prepare the body to undergo core training or matches." The warm-up exercises given are in the form of static stretches, namely systematically stretching all the limbs which can be done from head to toe. The warm-up exercise given is in the form of static stretching, namely stretching all the limbs systematically which can be done from the head to the feet. The warm-up movement must be done seriously to avoid injury.

According to (Setiawan & Purwanto, 2020) warming up includes isolation, namely exercises that are carried out by moving the body position not moving around or still in place, such as the half squat movement (leg position is one half shoulder width apart and the knee position is slightly bent) and exercises this aims to increase body temperature as well as to prepare the muscles of the joints and local muscles because the movement only revolves around the joints and local muscles. At this stage still using low intensity.

These movements are combined with hand variations that are suitable and relatively easy, then continue to contract the hip, abdominal muscles and strengthen the pelvic floor muscles or the back of the hips. Exercise intensity is a measure of a person to show the quality of a stimulus given during the exercise (stimulus in the form of sports motion activity). How to calculate exercise intensity according to the theory of Katch and Mc Ardle (1983), namely: DNM – Age = 220 – Age (in years) The measure of exercise intensity for performance sports is 80% - 90%. Dnm is our maximum heart rate and we can subtract the sum of our present ages so we will get the result.

CONCLUSION

Based on the results of research data analysis and discussion, it can be concluded that there is a significant influence between Body Language Gymnastics on Reducing visceral fat members of Pingky Pegandon Kendal Gymnastics. In this study, the sample decreased significantly with the average posttest being smaller than the pretest average (12.5 <13.1). 19 members experienced a decrease in visceral fat and 3 members did not experience a change.

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