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THE EFFECTIVENESS OF TRAINING FROM HOME ON VO_2MAX FEMALE VOLLEYBALL ATHLETES

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui efektivitas *Training From Home* (TFH) pada VO_2Max atlet bola voli putri pada siswa SMP Negeri 13 Kota Gorontalo. Penelitian ini menggunakan pendekatan eksperimen semu yang menggunakan populasi seluruh atlet putri di SMP Negeri 13 Gorontalo yang berjumlah 16 atlet, yang kemudian dibagi menjadi kelompok eksperimen dan kelompok kontrol berjumlah masing-masing keompok 8 atlet yang dipilih secara acak. Instrumen ini menggunakan *Multistage Fitness Test* (MFT) dan menggunakan skipping sebagai perlakuannya. Analisis data penelitian menggunakan uji-t sampel berpasangan atau uji-t menggunakan SPSS 20. Hasil penelitian ini dapat disimpulkan bahwa ada perbedaan yang signifikan efektivitas latihan TFH terhadap VO_2Max.

Kata kunci: latihan dari rumah; VO_2Max, bola voli

ABSTRACT

This study aims to determine the effectiveness of Training From Home (TFH) on VO_2Max female volleyball athletes at SMP Negeri 13 Gorontalo City. This study uses a quasi-experimental approach that uses a population of all female athletes at SMP Negeri 13 Gorontalo, totaling 16 athletes, who were then divided into an experimental group and a control group of 8 athletes each who were randomly selected. This instrument uses the Multistage Fitness Test (MFT) and uses skipping as a treatment. Analysis of research data using paired sample t-test or t-test using SPSS 20. The results of this study can be concluded that there is a significant difference in the effectiveness of TFH exercise on VO_2Max.

Keywords: *training from home;VO_2Max, volleyball*

Introduction

Volleyball is a game played by two teams, and each team consists of six people. Each player has his own skills, namely as a feeder (or tosser), hitter (or spike), and defender (or libero). The purpose of this game is to attack the opposing team by smashing or hitting the opponent's area until the opponent can no longer return the ball (Kusnandar et al., 2020) (Wahyu Cirana et al., 2021). In a sport, even including volleyball, athletes must be supported with good performance or physical condition. Because besides that, athletes really need good physical conditions, namely athletes really need good physical conditions for training and competitions. With good physical condition, athletes will find it easier to program for long exercises, in addition, during matches with good physical conditions, athletes will be able to optimize or maximize the best performance from the results of the training they have undergone.

Based on the observations and observations that have been made by researchers, it is seen that the development situation of this country's condition, especially the Indonesian government, which is being hit by the COVID-19 pandemic, has actually made an extraordinary impact on all human beings in Indonesia. Paying attention to this matter, it is related to a research that will be carried out (Rusman et al., 2021). Considering that it is very necessary that special exercises in improving a fitness are specifically on VO_2Max (Kadir, 2020), with the hope that the current athletes, especially for women's volleyball athletes, Junior High School 13 Gorontalo. From there, the condition of the covid-19 pandemic, then to improve the physical condition of the athletes as well as the second also to maintain the condition of physical skills which practice 3 times a week to be somewhat reduced due to the covid-19 condition, for that it is necessary to find a breakthrough how to empower the athletes. athletes who are like the current state. Current conditions need to be jacked up. Where researchers make breakthroughs by practicing at home so that the hope of achievement continues but can also continue to carry out government regulations regarding the handling of the covid-19 protocol.

Researchers put forward a breakthrough like this so that a forward can be found to support the achievements of the women's volleyball Junior High School 13 Gorontalo. The things that need to be considered so that later it can run well these trainers make a program, so that the program is approached through research. The program does not reduce the pandemic situation, so this breakthrough is that giving an exercise load also increases the endurance of the athletes, so that later the VO_2Max can be kept at a minimum in good condition.

The training program provided by the trainers is in the form of skipping exercise because we know that skipping exercise is a treatment carried out by athletes who can move to perform a physical activity, starting from the feet, hands, coordination of the limbs and the whole body, especially speaking, the flexibility problem of the athletes can be brought to the fore (Baumgartner et al., 2020)(Nasrulloh et al., 2021). So, paying attention to the current situation of the club condition and being associated with covid-19, the researchers wanted an exercise to be at home, so this trainer by giving such training was caught by the researcher to be approached in a study, namely Training From Home (TFH).

This MFT test is a test that has often been used because of the arrangement or procedure until the results of the data obtained are valid, safe, and reliable to be carried out with a large number of people (Kavcic et al., 2012). What is more advantageous about this test is that it has a high level of accuracy, uses simple tools, the procedure is simple, the implementation is easy, and everyone can understand the test results. At level 1 it is stated that the shuttle is 7 times with an accumulated speed of 8.0 km/h and the turnaround time is 9 20 seconds with a total level time of 63 seconds. The distance covered in level 1 is 140 meters with a total accumulated time of 1 minute 3 seconds, as well as other levels where the higher the level, the faster and the more turns.

Method

The type of research conducted is quantitative research with a quasi-experimental or quasi-experimental approach. In this study, we want to put forward a result of training data by doing a test which will later be calculated in the statistical process. Quasi-experiments are experiments that provide treatment, measurement of impact but do not give random assignments.

This research uses a Quasi-Experimental Design type of research. This study aims to determine the effect of something imposed on the research subject, in other words Quasi Experimental Design research tries to examine whether there is a causal relationship. The design in this study used the Nonequivalent Control Group Design. In this study there were two groups, namely the experimental group and the control group. The group that was given the treatment was called the experimental group and the group that was not treated was called the control group.

The treatment given in this study was a modification of Training From Home Skiping which was carried out for 4 weeks, each week doing 3 times of training. In the first and second weeks, skipping was done for 30 minutes. In the third and fourth weeks, skipping was carried out for 40 minutes by each participant who was given treatment.

The population used is all women's volleyball athletes for youth development in Tuban Regency, totaling 16 athletes. In this study the sampling technique used is total sampling. Total sampling is a sampling technique where the number of samples is the same as the total population. The reason this technique was chosen is because the population is relatively small and the research makes generalizations with very small errors (Sugiyono, 2018). Inclusion Criteria Athletes are in good physical and mental health (1) Athletes do not suffer from musculoskeletal injuries. (2) The athlete has no history of endocrine disease or internal organ disease. (3) Must be a female volleyball athlete for the youth development of Tuban district. Exclusion criteria (1) The subject is not willing to be a respondent. (2) The subject was not present at the time of the study. Instruments are measuring tools used to collect data in a study, (Ali Maksum, 2009)

In this study using one kind of instrument in data collection based on variables, namely to measure the ability of VO_2Max by using the Multistage Fitness Test (Bleep Test).

The data analysis techniques in this study include: Prerequisite test consisting of data normality test and data homogeneity test, followed by hypothesis testing consisting of Paired t-test and Independent t-test using SPSS 20.

Result

Research entitled Skipping Exercise with Model Training From Home (TFH) on VO_2Max in female volleyball athletes.

Table 1. Descriptive statistics

Descriptive statistics				
Data	Min	Max	Mean	Std. Dev
Pretest experimental group	30,60	33,90	32,0250	1,20801
Experimental group posttest	33,20	37,80	35,5875	1,56428
Pretest control group	30,60	33,20	31,8875	1,02739
Control group posttest	30,20	33,60	31,7375	1,26822

Table 2. Increasing influence

Research Variables	Mean Pretes	Mean Postest	Difference	Precentage
Experiment	32,025	35,587	3,56	11,1%
Control	31,8875	31,7375	0,15	0,4%

Table 3. Normality test

Data	Statistic	df	Sig.	Conclusion
Pretest experimental group	0,930	8	0,514	Normal
Experimental group posttest	0,938	8	0,594	Normal
Pretest control group	0,907	8	0,330	Normal
Control group posttest	0,929	8	0,511	Normal

Tabl 4. Homogeneity test of variance

	Levine Statistic	df1	df2	Sig.
Experimental	.217	1	14	.648
	.237	1	14	.634
	.237	1	12,905	.634
	.222	1	14	.645
	.608	1	14	.449
	.662	1	14	.429
Control	.662	1	03,952	.430
	.609	1	14	.448

Table 5. Paired T-Test

		Sig. (2-tailed)
Pair 1	Pretest experimental group	0,000
	Experimental group posttest	

Pair 2	Pretest control group	0,285
	Control group posttest	

Table 6. T-Test Group Statistic

	Group	N	Mean	Std. Deviation	Std. Error Mean
Posttes	Experimental	8	35,5875	1,56428	.55306
	Control	8	31,7375	1,26822	.44838

Table 7.Independent Sample Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
Posttes	F	Sig.	t	df	Sig. (2-tailed)
	.103	.753	5.407	14	.000
			5.407	13,426	.000

Discussion

The study, entitled the effectiveness of training from home on VO_2Max female volleyball athletes, obtained an average result that was categorized as sufficient for the two groups to be tested before treatment was carried out for the experimental group. This is of course reasonable, considering that both groups often exercise regularly. In line with the pretest, a person's level of physical fitness will be stable if they often do exercise regularly (Budayati, 2015). A person's physical fitness will be better if that person can maintain a healthy lifestyle (Nopiyanto et al., 2020).

This study also found that the group that received more structured treatment would increase VO_2Max. This is in line with the findings of previous research which revealed that by training the body in a structured manner, the body will adapt better according to the needs of the exercise (Zuhdy et al., 2015). This study uses skipping treatment which can spur a person to continuously consume oxygen in high intensity which causes oxygen absorption in the body to be more efficient.

Conclusion

Kesimpulan dari penelitian ini yaitu bahwa *Training From Home* (TFH) dalaam hal ini adalah Latihan skipping akan dapat meningkatkan meningkatkan VO_2Max secara signifikan daripada kelompok kontrol yang tidak melakukan *Training From Home* (TFH).

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