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ENDURANCE TRAINING MODEL FOR POLICE ACADEMY CANDIDATES

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Abstract

This study aims to develop and implement endurance training models for political party candidates and obtain empirical data on the effectiveness and efficiency of the results of the development of endurance training models for Police Academy candidates. Data is collected at PT. OCK Athletics Club in May 2019. Research and development in this exercise uses a qualitative and quantitative approach and uses the Research & Development (R&D) development model of Borg and Gall. Retrieval of data using a 12-minute running instrument (Guidelines for Administration of Physical Ability Tests and Anthropometric Examinations for Acceptance of Civil Servants in the National Police) with 60 subjects as PT students. OCK Athletic Club. Data collection techniques were processed using the onegroup pretest-posttest design, analyzed using t-test procedures and using the IBM Statistics application. The t-test results showed the final t-count of -10.999 on df showed 59 and Sig. (2-tailed) 0,000 <0.05 means that there was a significant difference in the endurance training model for Police Academy Candidates.
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Keywords: Model, training, endurance, Police Academy

Endurance is an aspect of physical condition that is still lacking attention, many still assume that physical health is sufficient, but there are still many who have a low level of physical fitness, because understanding the impact is so important in daily survival is still lacking. Endurance provides physiological benefits related to the heart, lungs, blood vessels and homeostasis of body weight and good fat content. Endurance also provides benefits that have an impact on psychological aspects, the lack of awareness that results in a lack of implementation of the knowledge of endurance benefits and the knowledge of endurance training models that are more varied are still lacking. Endurance is an important component that must be possessed to be able to do a certain work either light or heavy physically well by avoiding the effects of injury and or experiencing excessive fatigue.

Interest in endurance perspectives other than for daily survival activities, for a candidate for a state servant figure, for example a cadet of political cadets, can be used as capital to prepare themselves related to physical weights must be good, in addition to having quality abilities with psychological weight, health weight, and weight good academic. In the physical context, it is explained as in the general requirements for the recruitment of prospective police officers at the Police Academy, and must be required to have physical and mental health criteria (Information System for the Acceptance of the National Police, t.t.). This is because endurance in physical fitness test A (running for 12 minutes) is involved in one of the stages of physical perfection test. This is usually the relevant agencies will work together with the TNI or the Police, tests to test muscle endurance (muscle endurance) and cardio respriory (including cardiovascular, respiratory and circulatory endurance) (Warsino 2019, 19).

Tudor Bompa, (2015); said practice, exercise, and training. ''Training is the process of executing repetitive, progressive exercises or work that improves the potential to achieve optimum performance.'' further (Chan, 2012), Exercise is an activity that is carried out systematically and planned in improving the functional body. In sports activities, exercise is useful for improving skills

Mansur, et al., (2009), explained Endurance in sports achievement is: (1) the ability to fight fatigue in muscle workload that lasts a long time, (2) the ability to recover in the shortest possible time. Thompson, (2009) said''Anaerobic means ''without oxygen'' and anaerobic endurance refers to the energy systems which are capable of operating without oxygen present. They allow muscles to operate using energy they already have in store'' McArdle in Ahmad explained the aerobic energy system is the process of energy formation that requires the presence of oxygen so that the process can run perfectly to produce ATP. This aerobic system includes the oxidation of carbohydrates, fats and proteins stored in cells. The oxidation process takes place in the mitochondria. The energy (ATP) produced by this oxidation process is far more than that of anaerobic glycolysis. Protein oxidation only occurs in very urgent circumstances. Ahmad, (2017). Bompa & Haff, (2009,): Bioenergetics, Cardiovascular System, Neuromuscular System. Lack of knowledge on the stages of the process, described in detail with various stages, namely the initial examination, the first stage of health examination, psychological examination, academic testing with general knowledge material, the second stage of health examination, physical ability testing and anthropometry final administrative examination, and finally the trial Determination of panda level graduation, therefore endurance training must be prepared for the period of the periodization and the training model before facing the physical safety test of course the focus is on endurance. Usually done strictly by considering the value of each criterion namely the value of the Health Check, Psychological Examination, Academic Test, and Physical Test (Fadlina et al. 2018). The same meaning Akbar, (2013) said that aerobic endurance is the ability of the heart-lung system and blood vessels to function optimally when carrying out daily activities for quite a long time without experiencing significant fatigue. A cardiorepiratory condition that impacts the increased demand for the lungs, heart, and other body systems also known as aerobics or endurance training. Clover, (2007),

Based on discussions, interviews and surveys with Sinaga, (founder of PT. OCK Athletics Club) on Wednesday, December 12, 2018 conducted at PT. OCK Athletic Club which is located at Plaza Niaga I Sentul City, where the club houses, fosters, and guides physical, academic, and psychological well-being. Sinaga explained that the focus on the context of physical abilities consists of physical fitness test A (running for 12 minutes). Highlighting the results of 12 minutes running endurance is still lacking based on the latest data PT. OCK Athletics Club in 2018, and the contribution of physical fitness test A (running for 12 minutes) has a weight of 50% because it is separate compared to physical fitness B with a weight of 50% but consists of pull up / chinning, sit up, push up, and shuttle run.

According to Sinaga, maintaining the existence of physical abilities especially physical A is (running for 12 minutes) is a characteristic that is respected and well-known PT. OCK Athletic Club which must be maintained and improved from year to year. Enthusiastic to develop the weight of good physical welfare values, able to cover the deficiencies of psychological and academic values. Physical safety scores are even able to jack up with a significant contribution if psychological scores and academic grades are good, so that it can affect the ranking of graduation or quota candidates for the Police Academy.

Endurance provides physiological benefits. The effect of endurance training has an impact on the heart where the capacity is greater and the pulse (stroke volume) becomes stronger and there is an increase in oxygen demand in the active muscle to be increased, more nutrients are used, and the metabolic process is accelerated, and produces metabolic waste. For blood vessels the elasticity of the blood vessels increases,

due to the addition of muscle contractility in the walls of the blood vessels. Benefits for the lungs, the elasticity of the lungs increases, so that the ability of the lungs to develop deflated becomes increased. Effects to the body can provide work efficiency of each heart rate (stroke volume), resulting in a decrease in heart rate frequency which is characterized by a decrease in pulse at rest. In addition, the amount of active alveoli increases using oxygen, and requires oxygen without causing fatigue (Palar , Disassembly, and Ticoalu 2015). Continued according to Arazi et al in Dudley & Flec explained when doing endurance exercises to maintain optimal body weight or to reduce body fat levels (Arazi et al. 2011).

Lack of awareness on psychological aspects can be a problem, because physical fitness that develops endurance can also eliminate tension, increase self-confidence, form a sportsmanlike spirit, teach patience, be happy, and practice concentration (Listyarini 2012). physical abilities need to always be maintained and maintained because physical abilities provide benefits not only good physical or physical abilities but also good psychic abilities. This is in accordance with the proverb saying "Mensana in corporesano" which means that in a strong body there is a healthy soul.

Awareness about the benefits is still lacking, including preventing heart disease, lowering high blood pressure, elevating the blood circulation system, increasing components of physical conditions, increasing stamina, accelerating the recovery of bodily functions after training or even in certain conditions, stimulating development in growth age , and for athletes usually a high degree of physical fitness functions to improve achievement, basically the physical condition is a unified whole of the components that cannot be separated, either increase or maintenance. (Ancok et al, 2017)

Having a good ability in physical fitness test A (running for 12 minutes), besides the lack of more varied endurance training models because based on the latest data on the Physical Fitness Test 2018 which is still less expected, from several explanations about the importance of endurance training the authors have the concept of thinking to make a "Training Model for Endurance for Police Academy Candidates", so that it can be utilized and used to increase physical fitness A (running for 12 minutes) so that it can significantly influence the weight of physical test scores so as to be able to boost psychological test scores and Academic testing, also contributes to the effects of physiology in a good body, good psychological and social relations, is expected to be useful and beneficial as well as being the target of achieving good physical fitness, can be used universally by many people. The purpose of this study is; What is the endurance training model for Candidates Police Academy? Did the development of an endurance training model for prospective Police Academy improve the results of physical fitness A (run for 12 minutes) ?, with the focus of the problem being 'The Effectiveness of the Endurance Training Model For Candidates Police Academies

METHOD

This study uses qualitative and quantitative approaches with the Research & Development (R&D) development model method from Borg and Gall. Assign a group of 60 research subjects, as explained in the large group test.

Table 7 Research Designs in Model Effectiveness Tests

Subject	*Pres-Test*	Treatment	*Post-Test*
R	O1	P	O2

1) Carry out a pre-test (O1) by trying a model that has been developed.
2) Carry out post-test (O2).
3) The instrument for taking the test uses the Aerobics Test, which is a 12 minute run, which is in accordance with the item A test (Administration Guidelines for Physical Ability Test and Anthropometric Examination for Acceptance of Civil Servants in the National Police, t.t.). Then look

for pre-test and post-test average scores and compare between the two. Looking for differences in the difference between the two averages through the statistical method (t-test) to determine whether there is a significant influence of the use of the applied training model, the formula for processing the overall

RESULT
Table 8 Pre-Test and Post-Test Results Tables

No	Subject	Pre-Test Run for 12 Minutes Mileage (Meters)	Score Value	No	Subject	Post-Test Run for 12 Minutes Mileage (Meters)	Score Value
1	X1	2440	53	1	X1	2540	58
2	X2	2710	66	2	X2	2880	74
3	X3	2580	60	3	X3	2430	53
4	X4	2490	55	4	X4	2620	62
5	X5	2490	55	5	X5	2560	59
6	X6	2420	52	6	X6	2540	58
7	X7	2710	66	7	X7	2870	73
8	X8	2650	63	8	X8	2730	67
9	X9	2490	55	9	X9	2590	60
10	X10	2510	56	10	X10	2610	61
11	X11	2490	55	11	X11	2570	59
12	X12	2650	63	12	X12	2790	70
13	X13	2450	54	13	X13	2440	53
14	X14	2810	71	14	X14	2980	79
15	X15	2489	55	15	X15	2540	58
16	X16	2420	52	16	X16	2610	61
17	X17	2450	54	17	X17	2520	57
18	X18	2690	65	18	X18	2580	60
19	X19	2570	59	19	X19	2650	63
20	X20	2410	52	20	X20	2530	57
21	X21	2890	74	21	X21	2990	79
22	X22	3010	80	22	X22	3150	87
23	X23	2730	67	23	X23	2830	72
24	X24	2820	71	24	X24	2910	75
25	X25	2840	72	25	X25	2870	73
26	X26	2730	67	26	X26	2795	70
27	X27	2690	65	27	X27	2710	66
28	X28	2350	49	28	X28	2410	52
29	X29	2760	68	29	X29	2820	71
30	X30	2850	72	30	X30	2895	75

31	X31	2690	65		31	X31	2700	65
32	X32	2510	56		32	X32	2600	61
33	X33	2750	68		33	X33	2810	71
34	X34	2730	67		34	X34	2810	71
35	X35	2620	62		35	X35	2720	66
36	X36	2610	61		36	X36	2750	68
37	X37	2430	53		37	X37	2520	57
38	X38	2215	42		38	X38	2320	47
39	X39	2410	52		39	X39	2530	57
40	X40	2350	49		40	X40	2480	55
41	X41	2350	49		41	X41	2430	53
42	X42	2690	65		42	X42	2750	68
43	X43	2630	62		43	X43	2740	67
44	X44	2410	52		44	X44	2580	60
45	X45	2470	54		45	X45	2550	58
46	X46	2420	52		46	X46	2540	58
47	X47	2620	62		47	X47	2740	67
48	X48	2420	52		48	X48	2570	59
49	X49	2430	53		49	X49	2420	52
50	X50	2350	49		50	X50	2390	51
51	X51	2310	47		51	X51	2390	51
52	X52	2550	58		52	X52	2640	63
53	X53	2150	39		53	X53	2250	44
54	X54	2290	46		54	X54	2370	50
55	X55	2270	45		55	X55	2550	58
56	X56	2470	54		56	X56	2530	57
57	X57	2470	54		57	X57	2570	59
58	X58	2550	58		58	X58	2670	64
59	X59	2090	36		59	X59	2230	43
60	X60	2280	45		60	X60	2450	54

The results of the data are calculated after using the IBM SPSS Statistics application. The following results are displayed after calculating the Paired Sample Statistics, Paired Sample Correlations, and Paired Sample Test.

Table 9 Results Table Paired Sample Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair PRETEST	57.55	60	9.043	1.167
POSTTEST	61.93	60	8.940	1.154

From the explanation above, it can be concluded that in general the results of summary descriptive statistics from the pre-test data showed that of the 60 samples obtained a Mean of 57.55, Std. Deviation 9,043 and Std. Error Mean 1.167. Then the post-test data showed that of 60 samples obtained a Mean 61.93 Std. Deviation 8,940 and Std. Error Mean 1.154. Thus the results can be explained.

Table 9 Results Table Paired Sample Correlations

	N	Correlation	Sig.
Pair 1 PRETEST POSTTEST	60	.941	.000

The results of the correlation or relationship between the two data variables pre-test and post-test showed that of 60 samples obtained correlations of 0.941.

Table 10 Paired Sample Test Results Table

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% confidence Interval of the Difference				
				Lower	Upper			
Pair1 PRETEST- POSTTEST	-4.383	3.087	.399	-5.181	-3.586	0.999	59	.000

In the test of significance of the difference with the IBM SPSS Statistics application obtained Mean-4,383, Std. Deviation 3.087, Std. Error Mean 0.399. At 95% Confidence Interval of the Difference shows Lower -5.181 and Upper -3.586 results. To draw conclusions, if the Sig (2-tailed) value <0.05, there is a significant difference, but if the Sig (2-tailed) value> 0.05, there is no significant difference. The final conclusion of the t-count of -10,999 in df shows 59 and Sig. (2-tailed) 0,000 <0.05 means that there is a significant difference in the endurance training model for the Police Academy candidates before and after the endurance training model is given. Based on this information it can be concluded that there is a significant and effective difference and can increase endurance that is implemented to the results of the A marathon run (12 minute run).

Finalt Product Revision

At this stage the final product of the endurance training model for the candidate of the Police Academy will be displayed along with the evaluation results and suggestions that have been given by expert studies based on the findings of deficiencies at the trial and revision stage. This endurance training model for the Police Academy candidates on the final product is applied during the Pre-test and Post test. The following final models can be seen in the appendix (Final Exercise Model).

1. Dissemination and Implementation

After the product has been declared effective in a number of tests, this product training model can be applied to the general public.

DISCUSSION

The final product of the endurance training model for prospective police academies who have gone through several stages of the process has effective and efficient results in building and developing endurance. The Pre-test and Post-test process that was passed showed the final result of the t-count of -10.999 on df showed 59 and Sig. (2-tailed) 0,000 <0.05 which means there was a significant difference in the endurance training model for the Candidates Police Academy. As for some of the endurance training model factors for candidates for the Police Academy that help in achieving the results are:

1. This endurance training model is designed with design based on the endurance training stages.
2. Presenting characteristics, in effective and efficient implementation can be done by all participants in building, building, and increasing endurance.
3. Media facilities and infrastructure both the equipment and other facilities have been provided by the club.
4. Innovations as outlined in this endurance exercise model, can attract participants' enthusiasm in doing so. Thus reducing monotonous exercise.
5. This endurance exercise model is structured from the level of effectiveness from easy to difficult.

In addition this research has been carried out to the maximum in accordance with the abilities and abilities of researchers, as for the limitations in this study that must be recognized so that this research can be developed for the future. Here are the limitations:

1. Some participants still need adjustments in doing this exercise model, because their cognitive ability to perceive movement readiness in the model and coordination is still not good.
2. The existence of physiological factors such as physical condition (health) when practicing and the level of ability before physical conditions there are already good and some are not good.
3. Psychological factors such as awareness, interest, enthusiasm, and enthusiasm, participation in participating in the practice.
4. The existence of other physical activities carried out, and some technical errors in the field that hinder the smooth running of the exercise model.
5. The ability to physiologically result from biological age and chronological age of exercise.

The training model applied in this endurance exercise indirectly makes the students of PT. OCK Athletics Club moves multilaterally in the whole process. In the process of this endurance exercise phase, it is carried out from easy to difficult things, from several stages it is intended to build and develop endurance that is implemented to the results of physical fitness test A (running for 12 minutes).

This endurance training model also emphasizes the 12 minute running results also increases the ability of functional physical conditions that are provoked by resistance or strength and conditioning exercises. The level of success or progress shown in this exercise according to researchers can be caused by the level of understanding of PT. OCK Athletic Club in seriousness, discipline, passion and enthusiasm in training. Besides that active participation in training is very necessary, and can also be caused by each student PT. OCK Athletic Club when participating in training in unfavorable conditions, In the process of

this exercise the researcher gave training according to the concept of the exercise or the stages carried out and did not clarify based on the level of endurance training ability owned by PT. OCK Athletic Club. The ability to manage, supervise and manage conditions during endurance training in the field is essential for the smooth running of the training process.

CONCLUSION

Based on the problems formulated, the discussion and analysis of data can be concluded: First, this endurance training model has stages including Aerobic Foundation, Aerobic Development, Aerobic Threshold, Lactate Threshold, and Maximum Aerobic that have been selected and are suitable for use (24 endurance training models) in the implementation, testing, and the results of the model revision have been implemented well. Secondly, the application of using the endurance training model for candidates for the Police Academy turned out to be effective in increasing endurance in physical fitness A (running for 12 minutes). The results are proven by the effectiveness of the t-test showing the results of the Pre-test and Post-test t-count of 10.999 on df showing 59 and Sig. (2-tailed) 0,000 <0.05 which means that there are significant differences in the endurance training model for candidates for the Police Academy.

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