



IMPACT OF FITNESS TRAINING PROGRAMME ON PHYSICAL FITNESS ASSESSMENT AMONG POLICE ACADEMY TRAINEES

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Abstract: The purpose of the study was to find out the effect of fitness training programme on physical fitness assessment such as 100m running performance, long jump performance and 1500m running performance among police academy trainees. To achieve the purpose of this study, twenty men trainees from Sathya Police Academy, Playamkottai, Tirunelveli District, Tamilnadu, India. The selection of subjects should be followed by simple random method. The selected subject's age was 24 ± 2.1 years. The selected subjects were randomly divided into two groups such as Group 'I' underwent fitness training programme group (n=10) and Group 'II' acted as control group (n-10). Group 'I' underwent fitness training programme group for five days and one session per day and each session lasted about one hour for six week period. Group 'II' was not exposed to any other specific training. The data on 100m running performance, long jump performance and 1500m running performance were measured by 100 sprint test (seconds), board jump test (metres) and 1500m run test (minutes) respectively. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the training programme. The pre and post-test scores were statistically examined by the dependent 't' test and Analysis of Co-variance (ANCOVA) for each and every selected variable separately. It was concluded that experimental group had shown significantly improved on 100m running performance, long jump performance and 1500m running performance due to the effect of fitness training programme. Non-investigation group (control group) had not shown any significant improvement on the selected variables such as 100m running performance, long jump performance and 1500m running performance.

Index Terms – Fitness Training, 100m running performance, long jump performance and 1500m running performance

1. INTRODUCTION

Sports and games have been part and parcel of culture and reflection of the large macro system of the society with in which the life exists. In an analysis of primitive societies, it was found that in the non-game culture which was meagre in number, the society was non-competitive, but it was characterized by a low level of political activity [1].

The training process acts as a means of improvement of sports performance. The purpose of training is to increase athletes work and skill capabilities and to develop strong psychological traits [2].

Physical fitness is an integrated measurement of cardio respiratory and endocrine-metabolic functions. The main function of the cardio-vascular and respiratory system is to supply the body with oxygen and nutrients, to release the body from carbon dioxide and metabolic by-products, to maintain the body temperature and acid-base balance and to transport hormones from endocrine glands to the place of their activity [3].

Physical fitness can be obtained by doing physical activity (sports). Exercise is an activity that has an influence on human daily life. It is said that because the sport is related to motion and motion itself will not be separated from human activity. Many human ways are to do this activity such as walking, running, jumping, punching, and stretching that accumulates with the term motion. Motion in sports activities is motion that has a purpose [4].

Assessment of a population's level of physical fitness is important because it reflects the outcomes of regular physical activity and is a strong predictor of health and functional abilities [5].

2. PURPOSE OF THE STUDY

The purpose of the study was to find out the effect of fitness training programme on physical fitness assessment such as 100m running performance, long jump performance and 1500m running performance among police academy trainees.

3. METHODOLOGY

To achieve the purpose of this study, I took twenty men trainees from Sathya Police Academy, Playamkottai, Tirunelveli District, Tamilnadu, India. The selection of subjects should be followed by simple random method. And the selected twenty subjects were randomly assigned to fitness training programme group (n=10) and control group (n=10). The age of the subjects were ranged from 24 ± 2.1 years. The selected subjects were randomly divided in to two equal groups namely Group-I underwent fitness training programme and Group-II acted as Control. The control group did not participate in any of the training programme except their regular activity. The study was conducted using a randomized pre and post-test design. Pre and post data for 100m running performance, long jump performance and 1500m running performance were measured by 100 sprint test, board jump test and 1500m run test respectively. All the variables were tested by 400m standard Track and field. Over the course of six-week training programme, the experimental groups did fitness training programme for five days a week. The pre and post-tests scores were statistically examined by the dependent-'t' test and Analysis of Co-Variance (ANCOVA) test for selected variables.

4. TRAINING PROGRAMME FOR FITNESS TRAINING PROGRAMME

The experimental group performed 6 weeks of fitness training programme, five sessions per week, each session lasted about 60minutes. Exercise program was taught to the subjects by an investigator with the help of experts in the field of sports training. The exercise training consists of 10-mins warming up, 40-mins fitness training programme and 10-mins cooling down exercises. Fitness training programme consists of Short Sprint, Acceleration Sprint, Resistance Sprint, Plyometric Exercises & 100m Sprint, Acceleration & Maximum Speed, Approach Run, Acceleration Drills, Maximum Speed, Take-off, Landing & Plyometric Exercises and 20-30-mins Continuous Run & Interval Training. Control group was advised to do their routine daily activities. Except continuous run and interval training, all the other exercises had 6-repetition and 3-sets with the intensity of 70-80 % at the initial weeks. After the first two weeks, the repetition was gradually decreased from 6 to 4 repetitions and the sets were gradually increased from 3 to 5 sets with the intensity of 80-95% respectively. Repetition method was followed on continuous running and interval training and it was give separate session in a every week of the training programme.

5. RESULT AND FINDINGS

The influence of the effect of fitness training programme on physical fitness assessment such as 100m running performance, long jump performance and 1500m running performance were analyzed and presented below.

Table-1

Computation of 'T' - Ratio between Pre and Post-Test Means of Experimental and Control Groups on 100m Running Performance, Long Jump Performance and 1500m Running Performance

Criterion Variables	Test	Experimental Group	Control Group
100m Running Performance	Pre test	15.08	15.14
	Post test	14.76	15.11
	't'-test	5.24*	0.73
Long Jump Performance	Pre test	3.91	3.89
	Post test	4.28	3.94
	't'-test	8.05*	1.17
1500m Running Performance	Pre test	5.94	5.91
	Post test	5.21	5.89
	't'-test	13.46*	0.97

*Significant at 0.05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

The table-I shows that the pre-test mean value on 100m running performance, long jump performance and 1500m running performance among experimental and control groups were 15.08 & 15.14, 3.91 & 3.89 and 5.94 & 5.91 respectively and the post-test means are 14.76 & 15.11, 4.28 & 3.94 and 5.21 & 5.89 respectively. The obtained dependent t-ratio values between the pre and post-test means of experimental and control groups are 5.24 & 0.73, 8.05 & 1.17 and 13.46 & 0.97 respectively. The table value required for significant difference with df 9 at 0.05 level is 2.26. Since, the obtained-'t' ratio value of experimental group was greater than the table value, it was understood that experimental group had significantly improved the 100m running performance, long jump performance and 1500m running performance. However, the control group has not improved significantly. The 'obtained t' value is less than the table value, as they were not subjected to any specific training.

Table-2

Analysis of Covariance on Selected 100m Running Performance, Long Jump Performance and 1500m Running Performance of Experimental & Control Groups

Test	Experimental Group	Control Group	SOV	SS	Df	MS	F-ratio
Adjusted Post-Test Mean							
100m Running Performance	14.73	15.09	B.M	2.97	1	2.97	9.57*
			W.G	5.27	17	0.31	
Long Jump Performance	4.25	3.93	B.M	67.17	1	67.17	17.96*
			W.G	63.58	17	3.74	
1500m Running Performance	5.17	5.90	B.M	109.90	1	109.90	59.73*
			W.G	31.28	17	1.84	

* Significant at 0.05 level. Table value for df 1, 17 was 4.45.

From the table-2 shows that the adjusted post-test means values on 100m running performance, long jump performance and 1500m running performance. The obtained f- ratio for variables was 9.57, 17.96 and 59.73 but the required table value of df 1 and 17 was 4.45. It shows that experimental groups of obtained value were greater than the required table value at 0.05 level of confidence. This results of the study indicated that there was a significant mean difference exist between the experimental and control groups on 100m running performance, long jump performance and 1500m running performance.

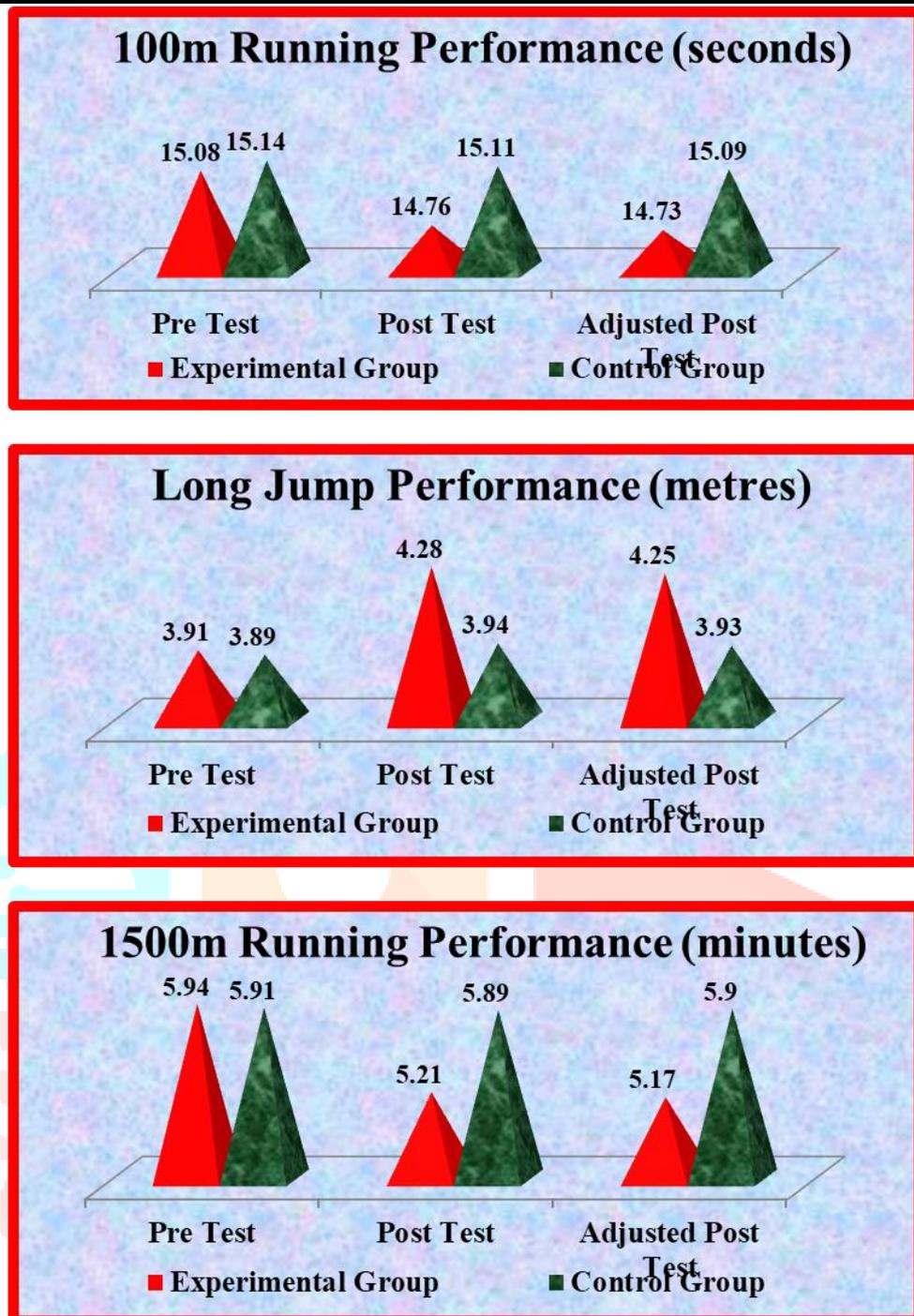


Figure I: Pre, Post and Adjusted Post Test Mean Values on 100m running performance, long jump performance and 1500m running performance among Experimental and Control groups.

6. DISCUSSION ON FINDINGS

The result of the study indicates that the experimental group namely fitness training programme group had shown significant improvement in all selected performance variables among the men police academy trainees. The control group had not shown significant changes in any of the selected variables. It reveals that the fitness training programme had registered significant level difference in 100m running performance, long jump performance and 1500m running performance when compared to control group among the men police academy trainees. The below findings are in accordance with observations made by the following renowned experts were Satheesh Kumar & Arumugam, (2018) conducted the influence of plyo push up exercises on shoulder strength and explosive power among sports participants. Fourie, Gildenhuis, Shaw, Shaw, Toriola & Goon, (2012) conducted to determine the effects of a mat Pilates programme on body fat in elderly women. Hetu, Christie & Faigenbaum, (1998) evaluated the effects of an 8-wk. conditioning program on selected measures of physical fitness and golf performance for 12 male and 5 female recreational golfers. Nguyen & Raney, (2014) determined the exercise training with fitness zone equipment in sedentary hispanic women. White & Ransdell, (2003) examined the effectiveness of a physical activity intervention which combined behavior-change strategies with a variety of physical activities for 30 sedentary adults in a 12-wk. From the above investigation it is also indicates that experimental group and

control group had significantly deferred after the training period of 6weeks on selected variables. The experimental groups were found to be superior to the control group on selected variables. It implies that the experimental group had developed the selected performance variables due to the effect of fitness training means. Proper training has been the potential instrument to increase health fitness variables among women police academy trainees.

7. CONCLUSIONS

1. There was significant improvement on 100m sprint performance due to the effect of fitness training programme among men police academy trainees.
2. There was significant improvement on long jump performance due to the effect of fitness training programme among men police academy trainees.
3. There was significant improvement on 1500m sprint performance due to the effect of fitness training programme among men police academy trainees.
4. There was significant difference exists between experimental and control groups on 100m running performance, long jump performance and 1500m running performance due to the effect of fitness training programme among men police academy trainees.
5. However the control group had not shown any significant improvement on any of the selected variables.

6. REFERENCES

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