



INFLUENCE OF PHYSICAL TRAINING PROGRAMME ON SELECTED PSYCHOMOTOR VARIABLES AMONG COLLEGE MEN STUDENTS

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Abstract

The purpose of the study was to find out the effect of physical training on selected psychomotor variables such as reaction time and balance among college men students. To achieve this purpose of the study, thirty men students studying in the Department of Physical Education and Sports Sciences, Annamalai University, Tamilnadu, India were selected as subjects at random. The age of the subjects were ranged from 18 to 20 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as physical training group (Group I) and control group (Group II). The physical training group (Group I) underwent physical training programme for three days per week for twelve weeks. Group III acted as control in which they did not undergo any special training programme apart from their regular curricular activities. All the subjects of two groups were tested on selected criterion variables such as reaction time and balance at prior to and immediately after the training programme by using Anand's reaction time chronoscope and stork stand respectively. The analysis of covariance (ANCOVA) was used to analysis the significant difference, if any between the groups. The level of significance to test the 'F' ratio obtained by the analysis of covariance was tested at .05 level of confidence, which was considered as an appropriate. The results of the study revealed that there was a significant difference between physical training group and control group on selected psychomotor variables such as reaction time and balance. Significant improvements on selected criterion variables were also noticed due to physical training.

Keywords: Physical Training, Psychomotor Variables, College Men.

INTRODUCTION

Physical exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment. Physical fitness comprises two related concepts: general fitness (a state of health and well-being), and specific fitness. Physical exercise is important for maintaining physical fitness and can contribute positively to maintaining a healthy weight, building and maintaining healthy bone density, muscle strength, and joint mobility, promoting physiological well-being, reducing surgical risks, and strengthening the immune system.

METHODOLOGY

The purpose of the study was to find out the effect of physical training on selected psychomotor variables such as reaction time and balance among college men students. To achieve this purpose of the study, thirty men students studying in the Department of Physical Education and Sports Sciences, Annamalai University, Tamilnadu, India were selected as subjects at random. The age of the subjects were ranged from 18 to 20 years. The selected subjects were divided into two

equal groups of fifteen subjects each, such as physical training group (Group I) and control group (Group II). The physical training group (Group I) underwent physical training programme for three days per week for twelve weeks. Group III acted as control in which they did not undergo any special training programme apart from their regular curricular activities. All the subjects of two groups were tested on selected criterion variables such as reaction time and balance at prior to and immediately after the training programme by using Anand's reaction time chronoscope and stork stand respectively. The analysis of covariance (ANCOVA) was used to analysis the significant difference, if any between the groups. The level of significance to test the 'F' ratio obtained by the analysis of covariance was tested at .05 level of confidence, which was considered as an appropriate.

ANALYSIS OF THE DATA

The influence of physical training on each psychomotor variable were analyzed separately and presented below.

REACTION TIME

The analysis of covariance on reaction time of the pre and post test scores of physical training group

and control group have been analysed and presented in Table I.

TABLE I
ANALYSIS OF COVARIANCE OF THE DATA ON REACTION TIME OF PRE AND POST TESTS SCORES OF PHYSICAL TRAINING GROUP AND CONTROL GROUP

Test	Physical Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	0.241	0.249	Between	0.001	1	0.001	0.20
S.D.	0.002	0.001	Within	0.14	28	0.005	
Post Test							
Mean	0.182	0.246	Between	0.86	1	0.86	49.14*
S.D.	0.003	0.001	Within	0.49	28	0.175	
Adjusted Post Test							
Mean	0.181	0.245	Between	0.79	1	0.79	39.50*
			Within	0.52	27	0.02	

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 1 and 28, 1 and 27 were 4.20 and 4.215 respectively)

The table I shows that the pre-test mean values on reaction time of physical training group and control group are 0.241 and 0.249 respectively. The obtained "F" ratio of 0.20 of pre-test scores is less than the table of 4.20 for df 1 and 28 required for significance at .05 level of confidence on reaction time. The post-test mean values on reaction time of physical training group and control group are 0.182 and 0.246 respectively. The obtained "F" ratio of 49.14 for post test scores is greater than the table value of 4.20 for df 1 and 28 required for significance at .05 level of confidence on reaction time. The adjusted post-test mean values of physical training group and control group are 0.181 and 0.245 respectively

on reaction time. The obtained "F" ratio of 39.50 for adjusted post-test means is greater than the required table value of 4.215 for df 1 and 27 required for significance at .05 level of confidence on reaction time. The results of the study indicated that there was significance between the adjusted post-test means of physical training group and control group on reaction time.

BALANCE

The analysis of covariance on balance of the pre and post test scores of physical training group and control group have been analysed and presented in Table II.

TABLE II
ANALYSIS OF COVARIANCE OF THE DATA ON BALANCE OF PRE AND POST TESTS SCORES OF PHYSICAL TRAINING GROUP AND CONTROL GROUP

Test	Physical Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test							
Mean	22.14	21.98	Between	0.01	1	0.01	0.026
S.D.	1.11	1.06	Within	10.51	28	0.375	
Post Test							
Mean	26.44	22.01	Between	119.63	1	119.63	320.73*
S.D.	1.02	1.05	Within	10.46	28	0.373	
Adjusted Post Test							
Mean	26.51	22.03	Between	101.62	1	101.62	236.32*
			Within	11.62	27	0.430	

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 1 and 28, 1 and 27 were 4.20 and 4.215 respectively)

The table II shows that the pre-test mean values on balance of physical training group and control group are 22.14 and 21.98 respectively. The obtained "F" ratio of 0.026 of pre-test scores is less than the table of 4.20

for df 1 and 28 required for significance at .05 level of confidence on balance. The post-test mean values on balance of physical training group and control group are 26.44 and 22.01 respectively. The obtained "F" ratio of

320.73 for post test scores is greater than the table value of 4.20 for df 1 and 28 required for significance at .05 level of confidence on balance.

The adjusted post-test mean values of physical training group and control group are 26.51 and 22.03 respectively on balance. The obtained "F" ratio of 236.32 for adjusted post-test means is greater than the required table value of 4.215 for df 1 and 27 required for significance at .05 level of confidence on balance.

The results of the study indicated that there was significance between the adjusted post-test means of physical training group and control group on balance.

CONCLUSIONS

Based on the results of the study, the following conclusions were drawn.

1. There was a significant difference between physical training group and control group on reaction time.
2. There was a significant difference between physical training group and control group on balance.
3. And also it was found that there was a significant improvement on selected criterion variables such as reaction time and balance due to physical training.

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