



IMPACT OF CIRCUIT TRAINING ON SPEED AND AGILITY AMONG PHYSICAL EDUCATION STUDENTS

Dr. M. Madan Mohan

Associate Professor, Department of Physical Education, A.V.V.M. Sri Pushpam College, Poondi, Thanjavur, Tamilnadu

Cite This Article: Dr. M. Madan Mohan, "Impact Of Circuit Training on Speed And Agility among Physical Education Students", International Journal of Interdisciplinary Research in Arts and Humanities, Volume 7, Issue 1, Page Number 54-56, 2022.

Abstract:

In this context, the investigator made an attempt to investigate the effect of circuit training on speed and agility among physical education students. To achieve the purpose of the study, thirty students from were randomly selected as subjects from A.V.V.M. Sri Pushpam College, Poondi, Thanjavur. The age of the subjects were ranged from 18 to 21 years. The subjects selected for this study were divided into two groups of fifteen subjects each. The experimental group I underwent circuit training and group II acted as a control group. The subjects were exposed to a circuit training programme for six weeks. The training programmes were organized in a progressive manner. The obtained data from the experimental and control groups initial and final readings were statistically analyzed with analysis of covariance (ANCOVA). The level of confidence which was fixed at 0.05 levels was considered as an appropriate one for this study. It was observed that the six weeks of circuit training have significantly improved the speed and agility.

Key Words: Circuit Training, Speed and Agility

Introduction:

Circuit training is an efficient and challenging form of conditioning. It works well for developing strength, endurance (both aerobic and anaerobic), flexibility and coordination. Its versatility has made it popular with the general Public right through to elite athletes. For sports men and women, it can be used during the closed season and early pre-season to help develop a solid base of fitness and prepare the body for more stressful subsequent training. Circuit training is an effective organizational form of doing physical exercises for improving all physical fitness components. Circuit training is a practical method entailing some preliminary planning, but beyond that, it needs co-ordination. Athletes find it motivating since it makes conditioning fun and challenging through competition against team mates. Circuit training is a continuous series of exercises attempting to improve as many components of physical fitness as possible especially endurance. Generally, six to twelve stations are up. Selection and sequence of the activities within a lap of circuit is made with consideration given to the continuous nature of the performance (Antonia et al. 2013).

Methodology:

In this context, the investigator made an attempt to investigate the effect of circuit training on speed and agility among physical education students. To achieve the purpose of the study, thirty students from were randomly selected as subjects from A.V.V.M. Sri Pushpam College, Poondi, Thanjavur. The age of the subjects were ranged from 18 to 21 years. The subjects selected for this study were divided into two groups of fifteen subjects each. The experimental group I underwent circuit training and group II acted as a control group. The subjects were exposed to a circuit training programme for six weeks. The training programmes were organized in a progressive manner. The obtained data from the experimental and control groups initial and final readings were statistically analyzed with analysis of covariance (ANCOVA). The level of confidence which was fixed at 0.05 levels was considered as an appropriate one for this study.

Results:

Table 1: Computation of Mean and Analysis of Covariance of Speed of Experimental and Control Groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	7.06	7.05	BG	0.0001	1	0.0001	0.028
			WG	0.121	28	0.004	
Post Test Mean	6.83	7.04	BG	0.318	1	0.318	73.246*
			WG	0.122	28	0.004	
Adjusted Post Mean	6.83	7.04	BG	0.320	1	0.320	72.832*
			WG	0.119	27	0.004	

* Significant at 0.05 level table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The above table indicates the adjusted mean value of speed of experimental and control groups were 6.83 and 7.04 respectively. The obtained F-ratio of 72.83 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on speed. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The

pre, post and adjusted post mean values of speed of both experimental and control groups are graphically represented in the figure-I.

Figure 1: Shows the Mean Values on Speed of Experimental Group and Control Groups

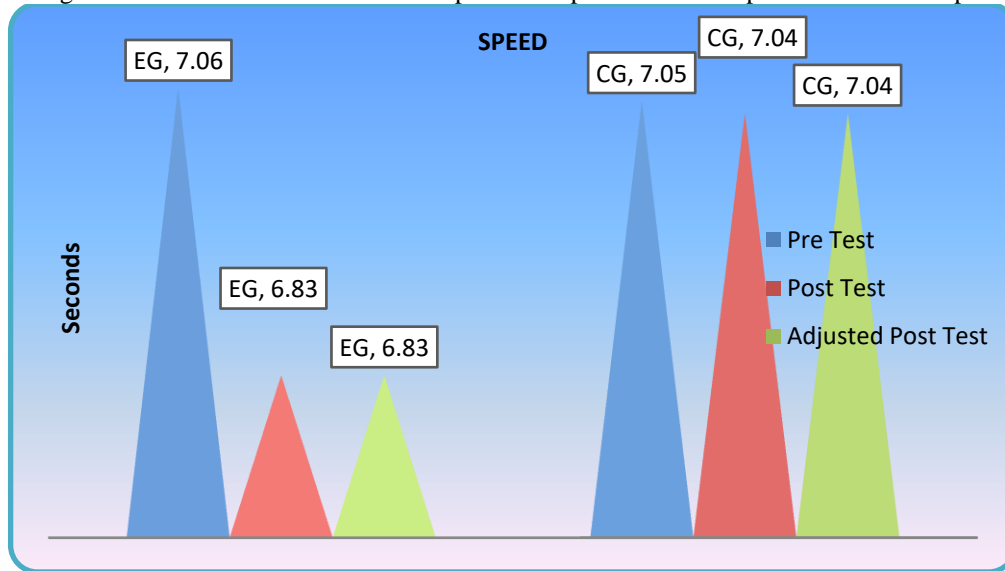


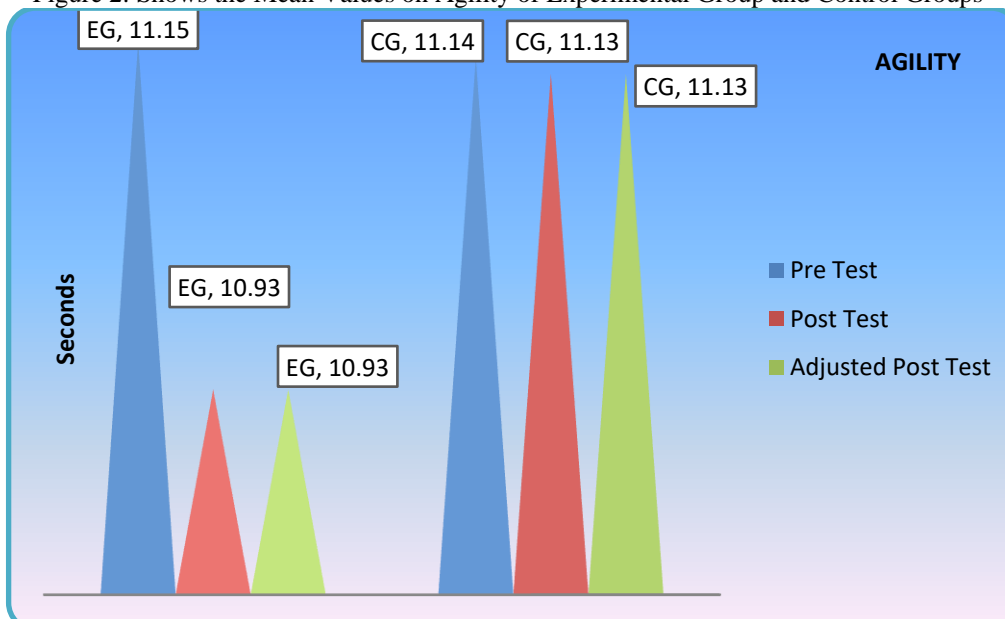
Table 2: Computation of Mean and Analysis of Covariance of Agility of Experimental and Control Groups

	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	11.15	11.14	BG	0.001	1	0.001	0.150
			WG	0.122	28	0.004	
Post Test Mean	10.93	11.13	BG	0.294	1	0.294	47.142*
			WG	0.175	28	0.006	
Adjusted Post Mean	10.93	11.13	BG	0.303	1	0.303	52.596*
			WG	0.156	27	0.006	

* Significant at 0.05 level, Table value for df 1 and 28 was 4.20, 1 and 27 was 4.21

The above table indicates the adjusted mean value of agility of experimental and control groups were 10.93 and 11.13 respectively. The obtained F-ratio of 52.59 for adjusted mean was greater than the table value 4.21 for the degrees of freedom 1 and 27 required for significance at 0.05 level of confidence. The result of the study indicates that there was a significant difference among experimental and control groups on agility. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted post mean values of agility of both experimental and control groups are graphically represented in the figure 2.

Figure 2: Shows the Mean Values on Agility of Experimental Group and Control Groups



Conclusion:

It was observed that the six weeks of circuit training have significantly improved the speed and agility.

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