ORIGINAL RESEARCH PAPER

Physical Education

EFFECTS OF SAQ TRAINING ON AGILITY OF SECONDARY SCHOOL BOYS

KEY WORDS: Speed Training, Agility Training, Quickness Training, Agility, Secondary School Boys

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ABSTRACT

The objective of the study was to find out the effects of selected training programme on agility of secondary school boys. For the purpose of the study 60 school boys of West Bengal were selected. The age ranged of the subjects was 18 to 23 years. Agility was selected as a dependent variable and speed training, agility training, quickness training and control group were considered as independent variables. For the study pre-test post-test randomized group design comprising of three experimental groups (n=15 in each group) namely speed training group, agility training group, quickness training group and one control group (n=15) were adopted. To test the agility of secondary school boy's 4x10 meter shuttle run was used. To compare the effects of selected training programmes on agility of secondary school boys, analysis of co-variance (ANCOVA) was used. In case of significant improvement, the LSD Post-hoc test was applied to find out the significant difference, if any, in paired adjusted final means. The level of significance was set at 0.05. The result shows that the F-value of agility was 12.870 which was significant at 0.05 level and hence it was concluded that all the groups were not equally effective in improving the performance of agility of secondary school boys.

INTRODUCTION

Movement is never a singular process. It always takes place in a setting governed by whole person concept. The relationship between the soundness of body and the activities of the mind is subtle and complex. Physical activity has become a central part of society. Understanding the many factors that influence physical activity may help to improve the effectiveness of physical activity intervention programme. Speed, agility and quickness training has become a popular way to train athletes, whether they are school level boys on a play field or professional in a training camp.

Speed as the rate at which a person can propel his body or part of his body through space. In addition general factors such as strength, reaction time and flexibility influence speed. Training programme should include specialized development in these areas.

To maintain a certain level of physical and physiological performance proper agility is essential. Agility is the physical ability, which enables an individual to rapidly change body position and direction in precise manner. Agility is affected greatly and differentially by the types of stimuli. Agility may be greatly improved with specific training. Some authors use the term co-ordination and dynamic balance synonymously with agility. However, it is a general agreement that individuals possessing sufficient strength; endurance; balance; hand – eye; foot – eye; overall body Co-Ordination and flexibility are also good in their ability of agility.

Quickness is an ability of an individual to react to stimuli with speed. Quickness training begins with 'innervations` isolated fast contractions of an individual joint.

Drill may be defined as teaching on training by having the learners do a thing over and over for practice. Many factors determine successful physical and physiological variables of secondary school level boys; a lot is said and heard about the contribution of each of them.

OBJECTIVE OF THE STUDY

To find out
(i) The difference among selected training programme in improving the performance of agility of secondary school boys.
(ii) The effect of various training programme on agility of secondary school boys.

METHODOLOGY

Sixty male subjects were selected from distinct districts of West Bengal, India. All the subjects were school going boys, ranging the age between 18-23 years. Three training programmes, namely speed training, agility training, quickness training and one control group were selected for this study. The Agility was selected as a dependent variable and speed training, agility training, quickness training and control training were considered as independent variables. To test the agility, 4x10 meter shuttle run test was used and measured in seconds. The pre-test and post-test randomized group design was used in the study. Each group contained 15 subjects. The treatment was administered on all the experimental groups for three days a week (45 min/day) for the period of twelve weeks while the control group underwent their own life style. Before the administration of training schedule, pre-test data on agility was collected from all the experimental groups and control group. Similarly after the completion of twelve weeks post training data of all the groups were collected. To find out the effects of selected training programme on agility of secondary school boys, Analysis of Co-Variance (ANCOVA) was used. The LSD post-hoc test was used to find out the paired mean difference. The level of significance was set at 0.05.

Result & Discussion:

The personal data of the subjects were presented in Table 1 to ascertain the homogeneity of the groups.

Table 1: Personal Data of the Subjects

Age (year)		Height (cm)		Weight (kg)	
Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
21.18	4.23	164.80	3.46	58.40	3.21

Table 1 showed that the mean age of the subjects were 21.18±4.23 years. The mean height and weight was 164.80±3.46 cm and 58.40±3.21 kg respectively.

The findings pertaining to mean, standard deviation, standard error of mean, minimum value and maximum value of the subjects for three distinct treatment groups and one control group of Pre-Test and Post-Test had been presented in Table 2.

Table 2: Descriptive Statistics of Agility on Selected Training Programme (n=15)

Fitness Components	Groups	Min Value	Max Value	Mean	SEM	SD
Speed Training	Pre-Test	9.30	11.81	10.62	0.22	0.86
	Post-Test	9.05	11.44	10.12	0.23	0.88
Agility Training	Pre-Test	9.32	11.86	10.81	0.20	0.76
	Post-Test	8.72	11.52	10.14	0.21	0.82

Quickness Training	Pre-Test	9.48	12.08	10.70	0.21	0.82
	Post-Test	9.13	11.87	10.48	0.23	0.88
Control Group	Pre-Test	10.02	11.82	10.84	0.13	0.49
	Post-Test	10.13	11.78	10.89	0.12	0.47
Abbreviation: Min = Minimum, Max = Maximum, SEM = Standard Error of Mean, SD = Standard Deviation						

Table 2 indicated that the mean value of agility in pre-test for speed training, agility training, quickness training and control group were 10.62±0.86 second, 10.81±0.76 second, 10.70±0.82 second and 10.84±0.49 second respectively. Also the mean value of agility in post-test for speed training, agility training, quickness training and control group were 10.12±0.88 second, 10.14±0.82 second, 10.48±0.88 second and 10.89±0.47 second respectively.
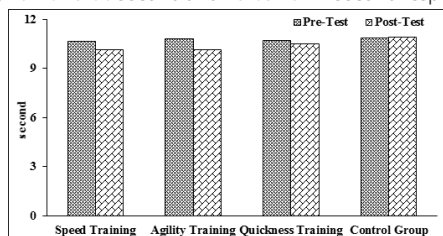
Figure 1: Graphical Representation of Agility on Selected Training Programme

Figure 1 showed that the graphical representation of pre-test and post-test data of agility on three different treatment group and one control group of secondary school boys.

Table 3: ANCOVA for Distinct Groups on Agility for Pre-Test and Post-Test Data

Source	Sum of Squares	df	Mean Square	F-value	Sig. Level (p-value)
Treatment Groups	4.624	3	1.541	**12.870***	.0001
Error	6.587	55	0.120		
Corrected Total	40.038	59			
*. Significant at the .05 level					

Table 3 indicated that the F-value for comparing the adjusted means of the three treatment groups and one control group during post-testing. The F-value of Agility was 12.870. Since p-value for the F-statistics is 0.0001 which is less than 0.05, it was significant. It was concluded that all the groups were not equally effective in improving the performance of Agility of secondary school boys.

In order to find which treatment was more effective, pairwise comparison analysis of adjusted means of post-test data would be carried out.

Table 4: Pairwise Comparisons of Distinct Groups of Adjusted Means on Agility Obtained in Pre-Test and Post-Test Data (N = 15)

| Speed Training	Agility Training	Quickness Training	Control Group	Mean Difference	Sig. Level (p-value)	Critical Difference
10.24	10.07			0.164	.202	0.253
10.24		10.52		**0.281***	.031	
10.24			10.80	**0.565***	.0001	
	10.07	10.52		**0.445***	.001	
	10.07		10.80	**0.729***	.0001	
		10.52	10.80	**0.284***	.029	
*. The mean difference is significant at the .05 level						

Table 4 expressed that p-value for the mean difference between speed training & quickness training was 0.031; speed training & control group was 0.0001 also the p-value for the mean difference between agility training & quickness training was 0.001; agility training & control group was 0.0001 and quickness training &

control group was 0.029. All these p-values were less than 0.05 and hence they were significant at 5% level of confidence. Thus, the following conclusions could be drawn:
i) There was a significant difference between the adjusted means of the speed training & quickness training on the data of Agility during post-testing.
ii) There was a significant difference between the adjusted means of the speed training & control group on the data of Agility during post-testing.
iii) There was a significant difference between the adjusted means of the agility training & quickness training on the data of Agility during post-testing.
iv) There was a significant difference between the adjusted means of the agility training & control group on the data of Agility during post-testing.
v) There was a significant difference between the adjusted means of the quickness training & control group on the data of Agility during post-testing.

Speed training and agility training were equally effective whereas control group was least effective.
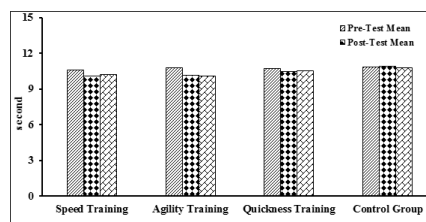
Figure 2: Graphical Representation of Pre-Test, Post-Test Data & Adjusted Mean for Distinct Groups on Agility

Figure 2 indicated that the graphical representation of three treatment groups and one control group mean of pre-test & post-test data and adjusted final mean for distinct treatment groups and control group on agility.

CONCLUSIONS

Within the limitations of the study, it may reasonably be concluded that agility performance in speed training and agility training were equal and was significantly lesser than that of the control group. Hence, it may be inferred that speed training and agility training were equally effective in increasing agility performance among the subjects in comparison to that of control group.

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