



## IAAF KIDS' ATHLETICS PROGRAMME ON SELECTED BIO-MOTOR VARIABLES OF SCHOOL CHILDREN

### Physical Education

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### ABSTRACT

The purpose of the study was to analyze the effect of IAAF KIDS' ATHLETICS training programme on selected bio motor variables of school children. The experimental design of this study was random group design. For this purpose (N= 60) sixty school children (both boys and girls), of age group 9 to 12 years from St. Mary's English medium school Kuzhichal, Kannur, Kerala, were selected. The subjects were divided into two groups of thirty (n=30) each namely experimental group and control group. The experimental group underwent twelve weeks of IAAF KIDS' ATHLETICS training programme on alternate days per week (Monday, Wednesday and Friday).

The dependent variables selected for the study were selected bio motor abilities namely speed, speed endurance, muscular strength, muscular endurance, coordination, balance, explosive power, agility and flexibility. The independent variable selected for the study was IAAF KIDS' ATHLETICS training programme. The data was statistically examined by applying descriptive statistics, paired't' test and analysis of covariance. All the data were analyzed using statistical package for social sciences (SPSS). The level of significance was fixed at 0.05 levels.

**Results:** The result of the study indicated that there were significant differences in all bio motor variables selected for this study.

### KEYWORDS

IAAF kids' athletics training programme, Bio motor abilities namely speed, speed endurance, muscular strength, muscular endurance, coordination, balance, explosive power, agility and flexibility.

### INTRODUCTION

Since time immemorial children have been interested in competing with each other and in seeking comparison with others. Athletics, with its variety of events, provides an excellent opportunity for this type of peer interaction. So that athletics remains a special occasion for these exchanges, the keepers of our sport have had to devise competitions totally appropriate for children. IAAF kids' athletics is one of the biggest grassroots development programme in the world of sports. It focus to ensure a steady and sustainable policy of development of the sport of athletics. The aim of which is to introduce children to athletics at a basic level, development of overall motor ability of kids and also a team spirit among themselves. The IAAF aims to popularize athletics in the six areas through a programme of several competitions called "a team event for children", which comprises of three event groups: sprinting/running event group, jumping event group and a throwing event group. There are three age categories targeted by the programme: 7-8 years, 9-10 years and 11-12 years. Hence the researcher made an attempt to find out the effect of IAAF KIDS' ATHLETICS PROGRAMME on selected bio-motor variables of school children.

### Methods & Materials

**Sample:** To achieve this purpose of the study a total of sixty (N=60) school children (both boys and girls), of age group 9 to 12 years from St. Mary's English medium school Kuzhichal, Kannur, Kerala, were

selected. The subjects were divided into two groups of thirty (n=30) each namely experimental group and control group.

**Treatment factor:** The experimental group underwent twelve weeks of IAAF KIDS' ATHLETICS training programme on alternate days per week (Monday, Wednesday and Friday). The intensity of the exercise was gradually increased by the use of more vigorous exercise after every two weeks. The subjects were tested on selected criterion variables namely speed, speed endurance, muscular strength, muscular endurance, coordination, balance, explosive power, agility and flexibility were measured by standardized tests such as 50 meters run test, 150 meter run, Pushups, Bent knee Sit ups, Alternate hand wall toss test, Stork stand balance test, Standing broad jump, Shuttle run, Sit and reach test, respectively.

**Statistical technique:** The data were statistically examined by applying descriptive statistics, paired't' test and analysis of covariance. All the data were analyzed using statistical package for social sciences (SPSS). The level of significance was fixed at 0.05 levels.

### Analysis and discussion on results

The data was statistically analyzed by applying independent't' test. The level of significance was set at 0.05 level. The analysis is presented in Table 1.

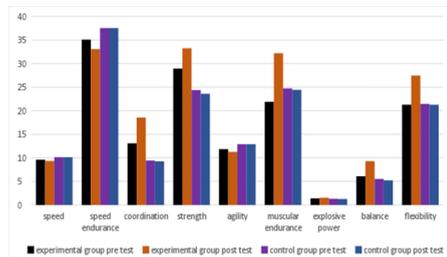
**Table 1 Mean comparison and Paired sample total for the experimental and control group on selected bio motor variables.**

variables	Groups	Pre test			Post test			t ratio	Table Value
		n	mean	SD	n	mean	SD		
speed	experimental	30	9.5963	1.44225	30	9.3457	1.10033	2.242	2.045
	Control	30	10.0997	.91541	30	10.1077	.91885	-2.449	2.045
Speed endurance	experimental	30	35.1163	3.42780	30	33.0610	2.39415	3.712	2.045
	Control	30	37.5393	1.92544	30	37.5493	1.94566	-.564	2.045
coordination	experimental	30	13.0667	6.77690	30	18.5667	7.39843	-9.312	2.045
	Control	30	9.4333	6.34461	30	9.2333	6.10643	.656	2.045
strength	experimental	30	28.9667	6.23938	30	33.2333	5.00815	-6.616	2.045
	Control	30	24.3667	5.35938	30	23.6000	5.87572	2.419	2.045
agility	experimental	30	11.8440	1.58412	30	11.2473	1.45890	6.523	2.045
	Control	30	12.8997	1.94501	30	12.8977	1.94857	.337	2.045
Muscular endurance	experimental	30	21.8667	6.75550	30	32.2000	7.59734	-12.605	2.045
	Control	30	24.7333	5.76194	30	24.4333	6.71942	.911	2.045
Explosive power	experimental	30	1.3643	.23731	30	1.4983	.23976	-6.703	2.045
	Control	30	1.2870	.35904	30	1.2677	.36945	4.325	2.045
balance	experimental	30	6.0690	3.40292	30	9.2973	5.32107	-3.184	2.045
	Control	30	5.5133	2.94347	30	5.1880	2.73663	2.738	2.045
Flexibility	experimental	30	21.2537	5.00048	30	27.4587	4.38905	-13.265	2.045
	Control	30	21.4507	5.48167	30	21.2550	3.89430	1.217	2.045

\*Significant at .05 level. The table value at .05 levels with df 29 is 2.045.

**Table 1** indicates that, there was a significant difference in the experimental group after the training period in all the selected bio motor variables, speed, speed endurance, coordination, strength, muscular endurance, agility, explosive power, balance and flexibility. The graphical representations of the mean differences on these variables are presented in Figure 1.

**Figure: 1**



**Table 2 Analysis of Covariance and Pairwise comparison of post adjusted group means of Experimental Group and Control Groups**

variables	Post adjusted mean		Mean difference	F ratio	Table value
	experimental	Control			
speed	9.3457	10.1077	-.333*	12.359	4.02
Speed endurance	33.0610	37.5493	-2.838*	11.868	4.02
coordination	18.5667	9.2333	5.863*	15.132	4.02
strength	33.2333	23.6000	5.699*	29.627	4.02
agility	11.2473	12.8977	-.647*	47.676	4.02
Muscular endurance	32.2000	24.4333	9.925*	33.409	4.02
Explosive power	1.4983	1.2677	.156*	9.966	4.02
balance	9.2973	5.1880	3.749*	10.983	4.02
Flexibility	27.4587	21.2550	6.386*	611.522	4.02

**Discussion on results**

Table 1 and 2 reveals those twelve weeks IAAF KIDS’ ATHLETICS training programme had improved on selected biomotor variables of school children. The subjects selected for the study had no previous experience on physical training. They had been through their regular coaching schedule probably this could have been the reason for the improvement and IAAF KIDS’ ATHLETICS programme consists of jumping, running and throwing activities that may act as the foundational exercises for improve physical fitness. The improvement of physical fitness includes the improvement of general health, organic function increasing strength and stability of the musculo-skeletal system as well. The most important fundamental requirement for all sports and games are bio motor components. The findings of the study are supported by the following references.

Bavcević T, et.al. (2008) found out that influences of specially programmed physical education lessons can improved bio motor development in boys. The result indicated that there was a significant improvement in all bio motor variables selected for this study.

**CONCLUSION**

Over all the result of the study support that participation in the twelve weeks of IAAF KIDS’ ATHLETICS training programme resulted in the improvement of the following bio motor variables of school children. Those are speed, speed endurance, muscular strength, explosive power, muscular endurance, flexibility, agility, coordination and balance.

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