

Study of the Effect of the Plyometric Exercises Training on SAI Athletic Skill of the School student Athletes

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Abstract-

The scholar selected 30 school athlete between 14 to 16 years age group and decided to administer 3 months plyometric training to see the effect on their athletic skills scholar accessed the athlete skills by SAI athlete skill test prior to training and after 3 months of plyometric training and found positive significant effect of plyometric training on athletics skills of subjects.

Introduction :-

It is observed that the school children are very poor in athletics skills like running, jumping and throwing, scholar being a physical education director and is ex participant of inter school and inter-collegiate athletics sports hence he decided to test the athletic ability of school students in the age group of 14 to 16 years the average age of the students was 15.4 yrs

The scholar selected 30 school students and made them well versed about the purpose of his study. The selected students eagerly accepted to become the part of study

The Scholar decided to see the skill of athletes by conducting SAI athletics Skill Test. There are three main elements of SAI Athletics Skill

Test which are as follows

- (i) 60 Meters Run
- (ii) 300 Meters run
- (iii) Tennis ball throw

(i) **60 Meters Sprint Test** –The test is designed to access the skill ability in sprinting event of athletic

Equipment- Stop watches 3, marking chalk powder and wooden clapper

Administration of Test – 60meters distance is marked on 100 meters track the 3-4 lanes of 4 feet width were marked , the starting line and finishing lines were marked .3 subjects will run at a time and 3 time keeper will record the timings. The timing will be recorded to 1/10 of the second, whereas best

timings will be recorded and converted in to points as per given in SAI prescribed standards table

(ii) **300 Meters Run Test** –The test is performed on 400 meters track to access the skill ability in running event of athletic

Equipment- Stop watches 3, marking chalk powder and wooden clapper

Administration of Test – 300 meters distance is marked on 400 meters track the 3-4 lanes of 4 feet width are marked , the starting line and finishing lines were marked .3 subjects will run at a time and 3 time keeper are there to record the timings. The time keeper stands on the finishing line. The timing will be recorded to 1/10 of the second, whereas best timings will be recorded and converted into points as per given in SAI prescribed evaluation standards table.

(iii) **Tennis ball throw test** –The objective of the test is to measure the ability of throw of subject

Equipment- Performed on football field or any open ground, measuring tape, nylon rope, wooden pegs, marking chalk powder and tennis balls are basic equipments needed for the test.

Administration of Test –The subject needs to throw the tennis ball from behind the throwing line. The ball is supposed to be thrown from standing position using overhead throw. The maximum distance where the ball first hits the ground is recorded by means of measuring tape, and then the scores are converted into points as per SAI Athletic skill testing evaluation standards

The table below shows Athletic skill testing evaluation standards designed by Sports authority of India

Age group	60 mtrs. Sprint in seconds	300 mtrs. Run in seconds	Tennis ball throw	Points
14 to 16 years	8.8 & less	48 & less	32mtrs & more	3
	8.9-9.1	48.1-50.0	30-31.99	2
	9.2-9.3	50.1-53	28-29.99	1

The Study – the scholar selected 30 athletes of age group 14- 16 yrs of age average age was 15.4yrs the scholar selected plyometric exercises as given below

1. Medicine ball exercise
2. Jump on the box
3. Bonds
4. Hurdle hopping
5. Box jump
6. Depth jump
7. Incline push ups

The above designed exercise training was given to 30 students for 3 months

Hypothesis- The researcher hypothesized that there is positive significant effect of plyometric exercise training on SAI Athletic skills of school students’ athletes.

Before onset of plyometric training program the scholar conducted pre- test for SAI athletic skill test of subjects participating in study, the results obtain were tabulated for statistical analysis and mean and standard deviation were calculated of pre-test scores given in table No.1

Table No .1 Mean and standard deviation of the pre-test scores of SAI athletic skill test.

SAI athletic skill test	Pre –test	
	Mean (Mn)	Standard Deviation (sd)
60 mtrs. Sprint in seconds	1.26	0.58
300 mtrs. Run in seconds	1.4	0.62
Tennis ball throw	1.66	0.79

Source- From the Pre-test Scores of SAI athletic skill test

Discussion -The above table number1 clearly comprehend SAI skill test mean and standard deviation of pre-test scores before plyometric training.

The scholar conducted three months plyometric training exercise program and after completion of the training program the scholar conducted post- tests of pre-tests for SAI Athletic Skill Test, and collected the scores.

The scores were tabulated and statistical analysis was made to calculate means and standard deviation of athletic skills.The means and standard deviation of post–test SAI Athletic Skill Test after plyometric training are given below in Table number 2

Table No .2 Mean and standard deviation of the post-test scores of SAI Athletic skill test after plyometric training.

SAI athletic skill test	Pre –test	
	Mean (Mn)	Standard Deviation (sd)
60 mtrs. Sprint in seconds	2.26	0.58
300 mtrs. Run in seconds	1.93	0.80
Tennis ball throw	2.76	0.77

Source- From the Pre-test Scores of SAI athletic skill test

Discussion -The above table number2 clearly comprehend SAI skill test mean and standard deviation of post-test scores after plyometric training.

To see the effect of plyometric training of plyometric exercises for three monts duration, the scholar calculated the ‘t’ value between the pre- test and post –test results of mean and standard deviation and later compared it with tabulated ‘t’ as given statistical table number 3 below.

Table No. 3 Means and standard deviation of pre-test , post-test scores of of SAI athletic skills test and calculated ‘t’ value and tabulated ‘t’ value

SAI Athle tic skills	Pre-test		Post-test		Calcula ted ‘t’ value	Tabulated ‘t’ value
	Me an	Sd	Me an	Sd		
60 mtrs. Sprint	1.26	0.58	2.26	0.58	10.0	2.75at0.011 level of and 29degree of freedom

300 mtrs. Run	1.4	0.6 2	1.93	0.8 0	2.23	2.04at0.50l evel of significanc e and 29 degree of freedom
Tennis ball throw	1.66	0.7 9	2.76	0.7 7	5.5	0.01at0.50l evel of significanc e and 29 degree of freedom

Source – From the scores of pre-test , post-test scores of SAI Athletic skills test and calculated ‘t’ value and tabulated ‘t’ value from table

Discussion & conclusion-

the above table no. 3 indicates the pre-test, post-test scores of SAI Athletic skills test and calculated ‘t’ value and tabulated ‘t’ value from table The calculated ‘t’ of 60meters sprint is 10.0 whereas the tabulated ‘t’ is 2.75 at 0.01 level of significance and 29 degree of freedom. The calculated‘t’ of 300meters run is 2.23 whereas the tabulated ‘t’ is 2.04 at 0.05 level of significance and 29 degree of freedom. The calculated‘t’ of tennis ball throw is 5.5 whereas the tabulated ‘t’ 0.01 at 0.05 level of significance and 29 degree of freedom .

This proves that there is positive significant effect of plyometric training exercises on the athlete skills. Hence the hypothesis made by scholar that there is positive significant effect of plyometric exercise training on athletes skill is proved and scholar concluded that 3 months training of plyometric exercise given to athletes have significant positive effect on skill of athletes

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