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## The Effect of specific exercise on hurdle clearance of athletes

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### Abstract

The main purpose of the study was to find out the Effect of Specific Exercise on Hurdle Clearance of Athletes and the allied objectives were (1) To find out the initial performance of hurdler, (2) To find out the improvement in performances and (3) Which exercises are more beneficial for the improvement of hurdle performance. This study was hypothesized that the specific exercise for hurdler will give the positive effect on the hurdle clearance. The Sources of data were collected from the 30 subjects who were studying in the B.P.Ed. Course of Degree College of Physical Education Amravati. In this study 30 subjects were divided into Control 'A' and experimental 'B' group. The subjects for present study were selected by using the Simple Random Sampling Method. After selection of subjects Pre-test of Control 'A' and experimental 'B' group were taken by using Stop watch, Measuring Tape, Gymnastic Mats, Lime Powder, Clapper and Hurdles. The following exercises were given to the experimental group 'B'. (1) Front and back leg rotation, (2) Trail leg, (3) Hurdle side change, (4) Half hurdling, (4) take off sensation drill and Leg Tapping. The data were analyzed and interpreted by using 't' test and the level of significance at 0.05 was adequate for testing the hypothesis. Conclusion: (1) there was significant difference in the performance of initial and final test of the control group. (2) There was a significant improvement in the final test performance of the experimental group. (3) There was a significant improvement of the experimental group in Hurdle clearance test as compared to the performance of control group in the final test. So this indicates that some selected exercises have positive effects up on the Hurdle clearance and (4) Physical activities and regular clearance practice may help in the development of Hurdle clearance, to the control group, but in comparison to the exercises group of experimental, the result of the control group were statistically insignificant.

**Keywords:** Specific exercise, hurdle Clearance, athletes, statistically insignificant

### Introduction

The world of games and sports has crossed many milestones as a result of different types of researcher, and variety of scientific achievements in general and their application in the sports in particular. Scientific investigation of performances of sportsmen has been playing an increasingly important role in the training of athletes, in a scientific way to attain excellence in performance in sports. Coaches and Physical education teachers must extract maximum achievement from their trainees without much strain. This is possible only when coaches and physical education teachers utilize most beneficial method of training for the athletes. Accordingly, it follows that if the human machine is to be kept in good working orders some regular exercises are necessary. Athletic participation is necessary in certain specific schedule of training programme for the improvement of their performance.

### Method of Study

The Sources of data were collected from the 30 subjects who were studying in the B.P.Ed. Course of Degree College of Physical Education Amravati. In this study 30 subjects were divided into Control 'A' and experimental 'B' group. The subjects for present study were selected by using the Simple Random Sampling Method. After selection of subjects Pre-test of Control 'A' and experimental 'B' group were taken by using Stop watch, Measuring Tape, Gymnastic Mats, Lime Powder, Clapper and Hurdles. The following exercises were given to the experimental group 'B'. (1) Front and back leg rotation, (2) Trail leg, (3) Hurdle side change, (4) Half hurdling, (4) take off sensation drill and Leg Tapping. The Training Schedule is under as:

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**Training Schedule**

S.NO.	Day	Training
1.	Tuesday	No training but participating in their regular physical activity.
2.	Wednesday	As usual like Monday.
3.	Thursday	No training only relaxation exercise.
4.	Friday	As usual like that of Monday.
5.	Saturday	No training only massage.
6.	Sunday	Complete rest.

**Collection of Data**

Then Post-test on both groups was taken. After that collected data were put in Microsoft Excel to develop Master Chart and then 't' score technique were used for this statistical treatment.

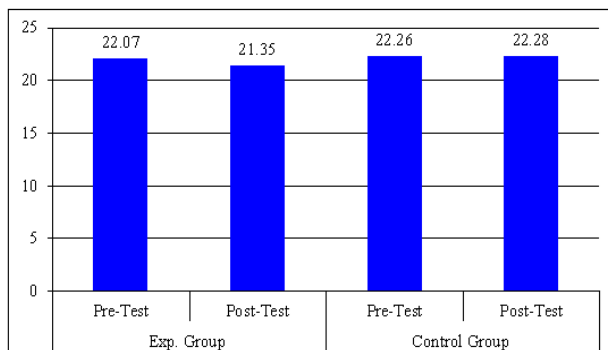
**Analysis of data**

The statistical analysis of the data gathered for the Effect of Specific Exercise on Hurdle Clearance of Athletes. The data were analyzed and interpreted by using 't' Test and the level of significance at 0.05 levels was adequate for testing the hypothesis.

**Table 1:** Mean of all the Tests of Experimental and Control Groups

Sr. No.	Test	Exp. Group	Control Group
1.	Pre-Test	22.07	22.26
2.	Post-Test	21.35	22.28

Table No. 1 shows that the mean of experimental group had increased moderately as compared to that of control group which mean that performance of the experimental group had increased. The mean score of experimental group were 22.07 Sec. in the initial test which had increased 21.35 in the final test whereas that of control group increased to 22.28 Sec. in the final test. Results of the comparison between initial and final mean scores of the two groups are presented in the table.



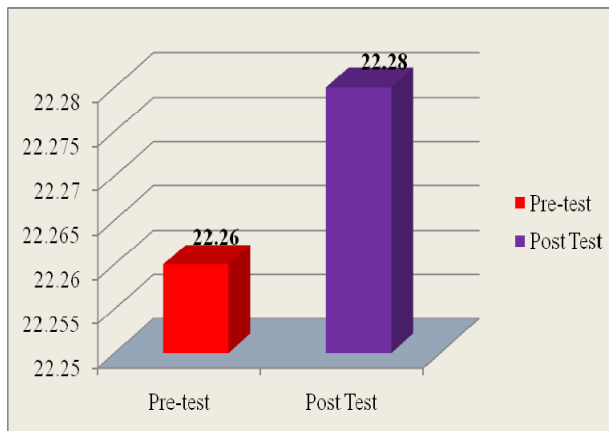
**Graph 1:** Graph Showing Comparison of Mean Scores all the Tests of Experimental and Control Groups

**Table 2:** Comparison of the Mean Scores of Pre and Post-Test of Control Group

Control Group	Mean	Df	O 't'	T 't'
Pre-Test	22.26	28	-0.059	1.98
Post-Test	22.28			

\*Significant at 0.05 level of confidence. Tabulated 't' 0.05 (28) = 1.98

The above table shows that on comparing the mean scores of initial and final tests of control group no significant difference were found. This was confirmed on the application of 't' test while comparing the mean scores of initial and final tests of experimental group significance were found at 0.05 level.



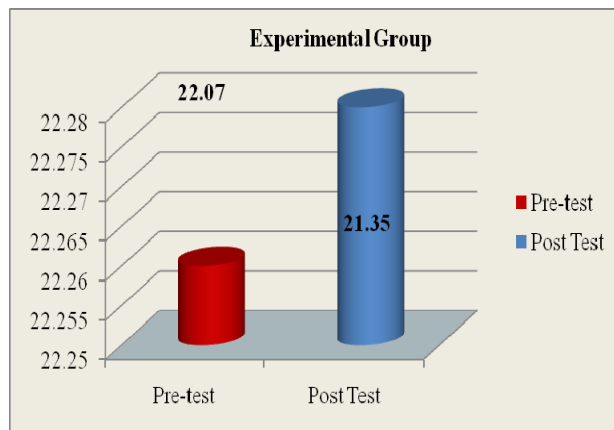
**Graph 2:** Graph Showing Comparison of the Mean Scores of Pre and Post-Test of Control Group

**Table 3:** Comparison of the Mean Scores of Pre and Post-Test of Experimental Group

Control Group	Mean	DF	O 'T'	T 'T'
Pre-Test	22.07	28	2.26	1.98
Post-Test	21.35			

\*Significant at 0.05 level of confidence. Tabulated 't' 0.05 (28) = 1.98

Likewise the scores of the final test of control and experimental groups were tested to find out the level of confidence of difference as shown in table no. 3. On applying the 't' test were confirmed that there were a significance in difference between the performance of the two groups at 0.05 level of performance.



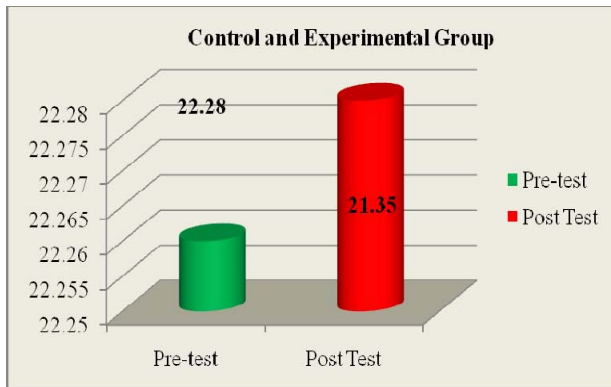
**Graph 3:** Graph Showing Comparison of the Mean Scores of Pre and Post-Test of Experimental Group

**Table 4:** Comparison of Mean Score the Post Tests of Control and Experimental Group

Control Group	Mean	DF	O 'T'	T 'T'
Pre-Test	22.28	28	3.43	1.98
Post-Test	21.35			

\*Significant at 0.05 level of confidence. Tabulated 't' 0.05 (28) = 1.98

Tabulated 't' value at 0.05 level for t test is 1.98 according to the table, Excluding the sign. it is 1.98 which is very much less than the standard value which shows that our program has got more effect on the performance of hurdle.



**Graph 4:** Graph Showing Comparison of the Final Mean Scores of the Final Tests of Control and Experimental Group

### Testing of Hypothesis

The Hypothesis was tested on the basis of statistical analysis and interpretation of data. It was hypothesized that there may be positive significant effect of selected exercises on Hurdle clearance of Hurdle trainees and the research hypothesis was accepted.

### Result

The result of the study is as: (1) there was significant difference in the performance of initial and final test of the control group. (2) There was a significant improvement in the final test performance of the experimental group. (3) There was a significant improvement of the experimental group in Hurdle clearance test as compared to the performance of control group in the final test. So this indicates that some selected exercises have positive effects up on the Hurdle clearance and (4) Physical activities and regular clearance practice may help in the development of Hurdle clearance, to the control group, but in comparison to the exercises group of experimental, the result of the control group were statistically insignificant.

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