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## The effects of ladder training on speed of Egyptian high school boys student's in Qatar

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### Abstract

The purpose of study was to find out the influence of ladder training on speed among Egyptian school students. Thirty school boys were randomly selected subject from studying Ideal Indian School, Doha-Qatar. And their age ranged between 13 and 17years. The selected subject were divided into two groups with fifteen (N=15) subject each. Group I underwent ladder training Group II served as control group. During the training period the experimental group undergone the respective training programme for 6 week and the training programme carried out for about one hour per day. The motor fitness variables speed was analyzed. The data collected from two groups before and after experimental training period and statistically examined using the analysis of 't' test. The result of the study shows that 6 week of ladder training programme have significantly increased on speed.

**Keywords:** Ladder training, speed, Egyptian

### Introduction

Physical activity, the rapid socio-economic changes in the Qatar past few decades has led to significant change in the way of life of the Qatar people. The advent of modern technology has increased the dependence on machines and decreased the need for physical activities. The people those who are living in Qatar from different countries have been affected by the changing lifestyle. Several environmental factors which are linked to urbanization can discourage people from becoming more active. In high income countries, 26 % of men and 35% of women were insufficiently physically active, as compared to 12% of men and 24 % of women in low income countries. Globally 81 %of adolescence aged 11 to 17 years were insufficiently physically active. Adolescents' girls were less active than adolescent boys with 84% vs 78% not meeting World Health Organization recommendations.

### Ladder Training

Ladder training is the latest method of multi-directional training program, because the elements of motor components that is strength, power, balance, agility, co-ordination, joint stability, foot speed, hand eye coordination and reaction time are increasing. By training, the mind and body to understand a variety of foot combinations. There are mostly four type of basic skill are used while training with ladder. These are runs through ladder, skips, shuffles and jump/ hops. Although linear and lateral moments are there. It can be learned in a slow controlled phase. Here I explain the three different types of drills these are steady-state drills, spurt drill and elastic response drill. Speed ladder drills are very important for all sports where agility, leg explosive strength, aerobic capacity and speed are important. Drills for agility ladder training should be done right after warming up so that your muscles are fresh and ready to give 100% under correct form.

### Methodology

The purpose of the study was to find out the effect of ladder training on speed of Egyptian high school boy's students in Qatar. To achieve the purpose of the study 30 Egyptian boy's students were selected as subject from Ideal Indian School, Doha- Qatar by applying random sampling method. The age of the subject ranged from 13 to 17. The selected subject was considered as two groups. 15 students were in one group consider the control group.

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And 15 students were in another one group considering as experimental group. Speed as a criterion variable was selected for the study. Speed was measured 60mts sprint from standing start position, measured time in seconds. Pretest was conduct for both group and collected the data.

**Training Programme**

6 weeks of ladder training was given to experimental group

and control group was not performing any activity during the 6 weeks. The duration of the training programme was morning one hour including warming up exercise, ladder training and cooldown exercise. Experimental group was performed each drills three time with a fast movement with 2 minutes rest. The experimental group undergone the following drills.

Week	Training Programme	Complexity of Drill	Number of Set	Rest Between Set	Intensity of Drill
Week 1 & 2	Straight Run	Easy	3 set	2min	Fast
	Two foot Run				
	Bunny Hops				
	Slalom Jumps				
	Bunny Twist				
	Lateral Run				
	Straight Skip				
Week 3 & 4	Side reach Run	Moderate	3 set	2min	Fast
	Bunny Twist				
	Brake Run				
	Lateral Run				
	Two in, Two out Forward Run				
	Two in Two out Lateral Run				
	In and out Bunny Hops				
Week 5 & 6	Bunny Hops	Hard	3 set	2min	Fast
	Skip Out				
	Side Step Run				
	Crazy Bunny				
	Out, Out, in with a Hip Rotation				
	Brake Run				
	Carioca Step				

After complete the 6 week training post test was conducted and collected data.

**Analysis of Data**

Table 1 show that the descriptive findings on the mean values for the pre and post-test for the control group and the

experimental groups in the terms of the speed components. The findings are explained only by using mean and standard deviation values.

**Table 1:** Descriptive statistics for the pretest and post-test for the control and treatment group

Components		Control N=15		Experimental N=15	
		Pre Test	Post Test	Pre Test	Post Test
Speed	Mean	9.9167	9.9133	9.7967	8.5467
	SD	0.7045	0.6986	0.5712	0.6376

Based on table 1 the mean score for the control l group pretest in the term of speed component was 9.9 167with the standard deviation of 0.7045 while the mean score post -test is 9.9 133 with the standard deviation of 0.69 86. The mean score for the experimental groups pretest was 9.7 967 with a standard

deviation was 0.5712 and the mean score for the posttest is 8.5 467 wilder standard deviation is 0.63 76

**T-Test Analysis between the Pretest and Post test in the Control Group and experimental group**

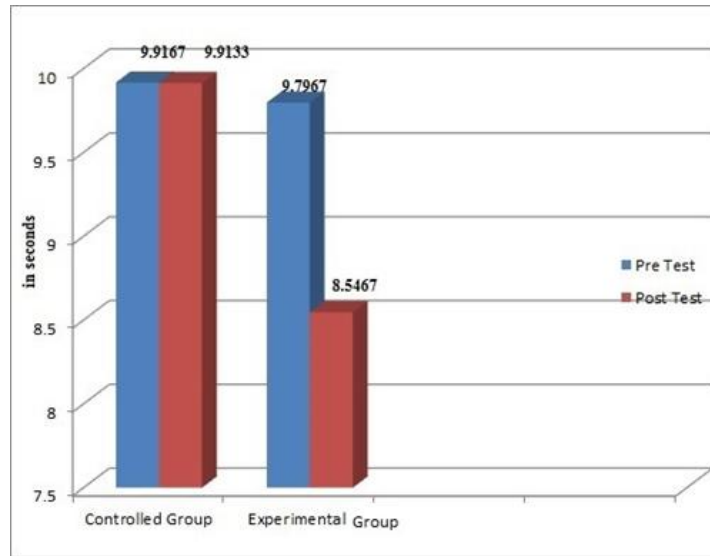
**Table 2:** Comparison of Pretest and Posttest in the Control Group and experimental group

Group	Test	Mean	Mean Deference	SD	t value
Control Group	Pre Test	9.9167		0.7045	
			0.0034		0.0653
	Post Test	9.9133		0.6986	
Experimental Group	Pre Test	9.7967		0.5712	
			1.25		11.9442
	Post Test	8.5467		0.6376	

N-15

Table 2 shows that the mean score of pretest and post test in the control group and experimental group. This findings was the analyzed by using paired t- test inferential statistics to find out whether there is a significant difference between the mean score of the pretest and posttest within the control group and experimental group. The finding of this analysis shows that

there is no significant difference between the pretest and posttest within the control groups in the terms of speed and the finding of experimental group analysis shows that there is a significant difference between the pretest and post test within the experimental groups in the terms of speed.



**Graph 1:** Comparison of speed components of pretest and posttest for the control group and experimental group

**Comparison of posttest between control group and experiment group towards speed**

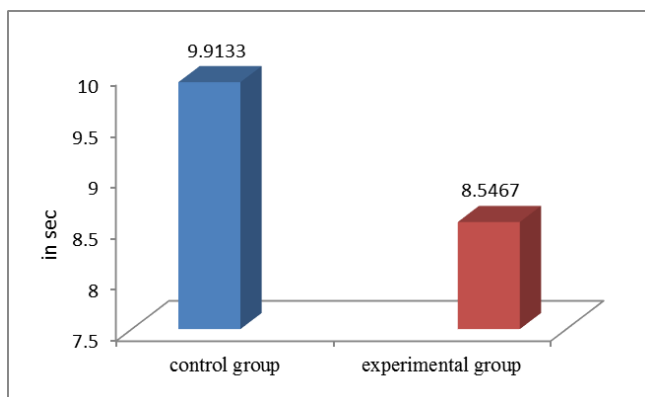
Table 3 shows that the mean score of posttest between control group and experimental group. This findings was the analyzed by using paired t- test inferential statistics to find out whether there is a significant difference between the mean score of the posttest between control group and experimental group.

**Table 3:** Comparison of posttest between control group and experiment group

Post test	Group	Mean	Mean Deference	SD	t value
	Control Group	9.9133		0.6986	
	Experimental Group	8.5467	1.3666	0.6376	5.5961

N=15,

Based on table 4 it was found that the mean score for the post test of the control group are 9.9133 with the standard deviation of 0.6986. While, the mean score of posttest of the experimental group is 8.5467 with standard deviation of 0.6376. The mean difference is 1.3666. Paired t- test analysis on the posttest of control and experimental group reveals a t-value of 5.5961. The finding of this analysis shows that there is a significant difference between the pretest and posttest within the control groups in the terms of speed.



**Graph 2:** Comparison of posttest between control group and experiment group

**Result and Discussion**

The result of the present study pointed out that there was a

significant difference on speed due to the ladder training. The current study utilize 6 weeks ladder training programs and a section in a day found that there is speed increases due to ladder training. The findings are also is in agreement with the findings of Dr. Young Sub-Kwon (2018) he conducted a study of Ladder training is a form of multidirectional lower limb plyometric training utilized by coaches and athletes in a variety of sports. The purpose of this study was to examine the effects of ladder training on sprint and change of direction in this study he found that there was a significant difference in the speed during the ladder training sessions. Mr. Kubendran M (2018) the purpose of the study was to investigate the impact of Ladder training on selected speed and agility parameters among college men handball players. For the purpose of the study he found that that has a significant difference in the speed parameters when the players are undergoing the ladder training sessions. From these studies we understood that after completion of the ladder training there had significance differences in the speed. Nining W. Kusnanik (2017) he conducted an experimental study about Effect of ladder speed run and repeated print ability in improving agility and speed of junior soccer players. In this studies he found that there was a significant differences in the speed parameters of two conditions of the ladder trading systems from the result of the present study and the literature it is concluded that dependent variable speed, there was significantly improved due to ladder trainings

**Conclusion**

Ladder training have been issued to increase the factors associated with the speed, in summary the speed can be improved during the age between 13 and 17 years of male Egyptian school students and is a favor the prescriptions of ladder training program during the initial adaptation period. There was also significant difference among the experimental Groups for the speed it can be concluded from the result that ladder training is the best method to improve speed.

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