

## Effect of ladder training on selected physical fitness variables on school volleyball players

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### Abstract

The purpose of this study was to find out the effect of ladder training on selected physical fitness variables on school volleyball players. To achieve the purpose fifteen school volleyball players were randomly selected from the SRKV High school, Ramakrishna Mission Vidyalaya, Periyanaickenpalayam, and Coimbatore. The subject’s age was ranged from 15 to 17 years. The selected subjects were considered as only one group. The following criterion variables were selected for the study such as physical fitness variables namely, agility and explosive power. The training period was for six weeks, three days a week two sessions each day. Data were collected from each subject before and after the six weeks of training. The collected data were statistically analyzed by using ‘t’ ratio. It is concluded that there is a significant improvement due to ladder training on agility, explosive power School volleyball players.

**Keywords:** Ladder training, agility, explosive power

### 1. Introduction

The history of volleyball dates as far back as 1895 in Massachusetts. The game of volleyball was very tame compared to the sport that we play today. You can find many different types of games in the history of volleyball– it can be everything from a recreational activity, played for exercise, and also amateur competitions and pro tournaments.

Training is an educational process. People can learn new information, re-learn and reinforce existing knowledge and skills, and most importantly have time to think and consider what new options can help them improve their effectiveness at work. Effective training conveys relevant and useful information that inform participants and develop skills and behaviors that can be transferred back to the workplace.

The word 'Training' has been a part of human language since ancient times. It denotes the process of preparation for some task. This process invariably extends to a number of days, even months and years. The term 'Training' is widely used in sports. There is, however, some disagreement among sports coaches and also among sports scientists regarding the exact meaning of this word. Some experts, especially belonging to sports medicine, understand sports training as basically doing physical exercises.

### 2. Materials and methods

The purpose of the study was to find out the effect of ladder training on selected physical fitness variables on school volleyball players. To achieve the purpose of the study, 15 students were selected as subjects from the SRKV High school, Ramakrishna Mission Vidyalaya, Periyanaickenpalayam, and Coimbatore, Tamil Nadu by applying random sampling method. The age of the subjects ranged from fifteen to seventeen years. The selected subjects were considered as one group. The following criterion variables were selected for the study such as physical fitness variables namely, agility and explosive power. Agility was measured by 4 X 10m shuttle run and explosive power was measured by vertical jump. The

training period was for six weeks, three days a week two sessions each day.

#### 2.1. Training programme

12 weeks of ladder training was given to the selected volleyball players, and these subjects undergone the following exercises: Double leg lateral hops- forward, Hop scotch – forward, Single leg lateral hops, Twist jump, Double leg lateral hop overs, Double leg front/back hops, Double leg lateral hops-backward, Fast feet, Single leg lateral hop overs, Hop scotch – forward skip a hole.

#### 2.2. Statistical technique

The following statistical procedure was employed to estimate the effect of ladder training on selected physical fitness variables on school volleyball players. ‘t’ ratio was calculated to find out the significant of the difference between the mean of pre and post test of the group.

### 3. Results and Discussion

#### 3.1. Ladder Training Group on Agility

The data obtained on agility of the ladder training group were analyzed using the ‘t’ ratio and are presented in table -1.

**Table 1:** Table Showing The Mean Difference, Standard Deviation and ‘t’ Value Of Ladder Training Group On Agility

Variables	Design	Mean	SD	DF	t-RATIO
Agility	Experimental Pre test	15.05	0.58	14	7.73*
	Experimental Post test	14.83	0.56		

\* Significance at 0.05 level of confidence

To find out the significant difference between pretest and post test on agility of ladder training group ‘t’ ratio was employed and the level of significance was set at 0.05. The ladder training group pretest mean value was 15.05 and posttest mean

value was 14.83 respectively. The mean difference value was 14 and ladder training group obtained 't' ratio was 7.73 was greater than the table value 2.14. It shows that the ladder training group had significant improvement on agility. Pretest and post test results of ladder training group on agility showed in figure 1.



Fig 1: Figure Showing the Mean Values of Ladder Training On Agility Ladder Training Group on Explosive Power

The data obtained on explosive power of the ladder training group were analyzed using the 't' ratio and are presented in table -2.

### 3.2. Ladder Training Group on Agility

Table 2: Table Showing the Mean Difference, Standard Deviation and 't' Value Of Ladder Training Group on Explosive Power

Variables	Design	Mean	Sd	Df	t-ratio
Explosive Power	Experimental Pre test	39.4	2.99	14	13.56*
	Experimental Post test	45.8	2.50		

\* Significance at 0.05 level of confidence

To find out the significant difference between pretest and post test on explosive power of ladder training group 't' ratio was employed and the level of significance was set at 0.05. The ladder training group pretest mean value was 39.4 and posttest mean value was 45.8 respectively. The mean difference value was 14 and ladder training group obtained 't' ratio was 13.56 was greater than the table value 2.14. It shows that the ladder training group had significant improvement on explosive power.

Pretest and post test results of ladder training group explosive power are showed in figure 2.3

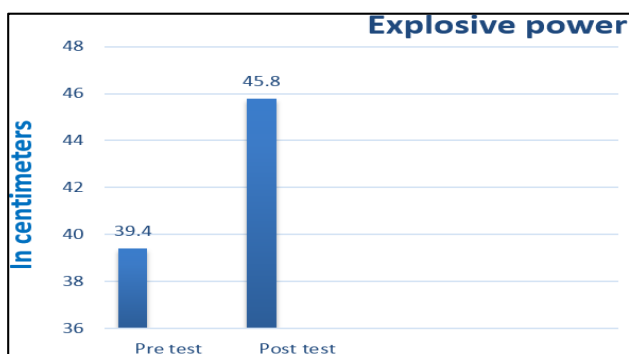


Fig 2: Figure Showing the Mean Values of Ladder Training Group on Explosive Power

### 4. Conclusion

It is concluded that there was a significant improvement due to ladder training on agility, explosive power School volleyball players

### 5. References

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