

Effect Of Ladder Training On Skill Performance Among Soccer Players

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ABSTRACT

The purpose of the study was to examine the effect of ladder training on skill performance among soccer players. In this study, forty (40) soccer players (age 13 to 14) from NEROCA Football Club, Imphal East, Manipur were selected randomly and assigned into two groups as experimental group (N=20) and control group (N=20). The selected skill performance as Dribbling (Figure 8 Dribbling Test) and Foot Juggling (Instep Juggling Test) were employed as tool for the study. The test is implemented as pre and post-test for both groups to find out the effectiveness of ladder training on skill performance. The experimental group has undergone one hour training program, five times a week for six weeks. The 0.05 levels of significance were fixed to find out the difference between the group means by employing the descriptive and pair t-test statistical techniques. The ladder training for the experimental group made significant difference in the selected skill performance test but in case of control group no significant difference was found.

Key Words: Ladder Training, Dribbling, Foot Juggling, Soccer.

INTRODUCTION

Soccer is a game of ball control both individually and in combination with other members of the team. To be able to control soccer ball, a player must master the fundamentals by using any part of his body but his hand and arms should not be used. The fundamentals are kicking, dribbling, trapping, tackling and heading. Performance in

soccer (association football) is a construct requiring a myriad of skills but is highly dependent upon a subtle blend of players physical, tactical, technical and socio psychological abilities from young age (Stolen et al., 2005).

Ladder training is the multi-directional training, because the elements of strength, power, balance, agility, co-ordination, proprioception, core and joint stability, foot speed, hand eye coordination, reaction time and mobility. Ladder skills are fun and functional ways to teach movement skills. By training, the mind and body to understand a verity of foot combinations. There are 4 basic skills is used when training with ladder. Runs, skips, shuffles and jump/hops. Although linear and lateral movements are biomechanical simple, their combination can be complex and many times overwhelming for the athlete. It will greatly improve the player's footwork which will improve player's quickness, agility and coordination after constantly performing different speed ladder training. Drills for agility ladder training should be done right after warming up so that the muscles are fresh and ready to give 100% under correct form ("Ladder training is the", 2013).

Many actions in soccer involve repeated short sprinting or dribbling with changes of direction. This ability to change direction rapidly is called "agility". Acceleration and agility while sprinting have been identified as independent qualities. It is not yet clear whether dribbling while accelerating and dribbling while performing agility task measure different components of the technical skill of dribbling, and what the exact relationship is between sprinting and dribbling over the same course (Huijgen et al., 2010). Instep juggling is the act of keeping the ball and balancing the ball off the ground by using the instep part of the feat. Juggling develops the skills of dexterity, coordination and balance in young soccer players. The athlete has developed their eye-to-foot coordination and will love to repeat the sequence successful.

OBJECTIVE

The objective of the study was to investigate the effects of ladder training on skill performance among soccer players.

METHODS

Participants: The study had sample size of 40 boys soccer players (N=40), were randomly divided into 2 equal groups and consisting of (N=20) Exp. Group and (N=20) Control Group were selected as subjects from NEROCA Football Club, Imphal East, Manipur who had participated at least in school, district, state and national level. The ages of subjects ranged were between 13-14 years of junior boys.

Procedure: Figure 8 Dribbling and Instep Juggling of 'Technical Tests' U.S W-YNT Program (2013) was designed for soccer players. The scholar has been collected data to conducting pre-test and post-test from both the group on selected skill performance namely dribbling and foot juggling of soccer players. The participants are required to dribble around each cone in a figure-8 pattern, without touching the cone, using both feet for 45 seconds and a full 'figure 8' count as 4 points and minus 1 point for every cone touched. Player juggles the ball with the instep in a 5x5 yard grid. The player has 60 seconds to achieve their maximum consecutive juggles are recorded on each right and left foot test. The tools and unit of measurement has been shown in table -1.

TABLE-1

Variables	Tests/Tools Administered	Unit of Measurement
Dribbling	Figure 8 Dribbling Test	Points/45 sec
Foot Juggling	Instep Juggling Test	No. /2min

Training Programme

The experimental group of Ladder Training programed was given for six weeks for five days in a week. The training sessions were last long for 45 to 55 minutes of regular training. The training schedule included exercises such as Two foot run, Ladder traps, Lateral angle leg hops, Single leg forward hop, Two foot lateral run, Fight shuffle, Skiers, Carioca, Lateral in in out out, Two in two out, Intermediate high knee run, Straddle squat hops, Two foot laterals hop in & out, Two-foot lateral hop, Ali shuffle, 180 Degree rotation, Jumping jacks variation, Advanced in in out out, Quick hops catch, Icky shuffle etc. For each session, ten

stations were used and participants change the partner after every end of steps jumping exercise and continued each exercise at least 3 set, depending on the class design.

Statistical Technique

The collected data were statistical analysis by using the IMB SPSS software (Version-21). The 0.05 levels of significance were fixed to find out the difference between the group means by employing the descriptive and pair t-test statistical techniques.

ANALYSIS OF DATA

The collected data's of experimental group (LTG) and control group (CG) on dribbling and foot juggling were analyzed and presented in table-II and table-III. The mean, standard deviation, standard error and 't' values of dribbling and foot juggling by comparing the pre-test and post-test means of experimental and control group have been shown at table II and III.

Table- 1I Pre and Post Test Means of Dribbling

Test	Group	Mean	MD	SD	SDM	DF	SE	Obtained 't'
Pre-Dribbling (N=20)	Ex-Group	15.85	6.05	2.20	1.50	19	0.49	17.99
Post- Dribbling (N=20)		21.90		1.44			0.32	
Pre-Dribbling (N=20)	Control Group	15.90	0.50	3.11	1.39	19	0.69	1.60
Post- Dribbling (N=20)		16.40		2.37			0.53	

***Significant at 0.05 level, $t_{(1,19)} = 2.093$**

Table II reveals that the means and standard deviations of the pre and post tests for dribbling of experimental group were 15.85 ± 2.20 and 21.90 ± 1.44 respectively, and control group were 15.90 ± 3.11 and 16.40 ± 2.37 respectively. The obtained t-values in experimental group was 17.99 and it was greater than tabulated t-value (2.093) at 0.05 level, so it was found significant improvement on dribbling. The obtained t value of dribbling in control group was 1.60 and it was lesser than tabulated t value (2.093) at 0.05 level, so it

was not found significant improvement. The graphical presentation of mean comparison is shown in figure1.

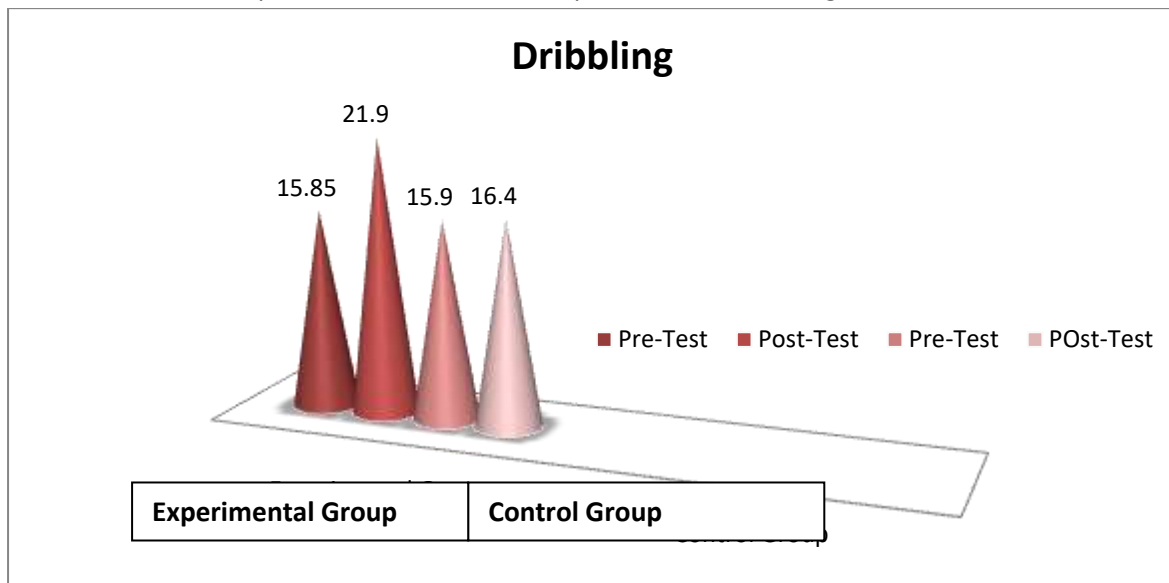


Figure-1. Means Comparison of Pre and Post Test for Foot Juggling of Experimental and Control Group

Table- 1II Pre and Post Test Means of Foot Juggling

Test	Group	Mean	MD	SD	SDM	DF	SE	Obtained 't'
Pre- Juggling (N=20)	Ex-Group	21	24.8	8.88	9.54	19	1.98	11.64
Post-Juggling (N=20)		45.85		15.18			3.39	
Pre- Juggling (N=20)	Control-Group	19.70	0.55	8.63	4.04	19	1.93	0.60
Post-Juggling (N=20)		20.25		6.34			1.41	

***Significant at 0.05 level, $t_{(1,19)} = 2.093$**

Table II reveals that the means and standard deviations of the pre and post tests for foot juggling of experimental group were 21 ± 8.88 and 45.85 ± 15.18 respectively, and control group were 19.70 ± 8.63 and 20.25 ± 6.34 respectively. The obtained t-values in experimental group were 11.64 and it was greater than tabulated t-value (2.093) at 0.05 level, so it was found significant improvement on foot juggling. The obtain t value of foot juggling in control group was 0.60 and it was lesser than tabulated t value (2.093) at 0.05 level, so it was not found

significant improvement. The graphical presentation of means comparison is shown in figure 11.

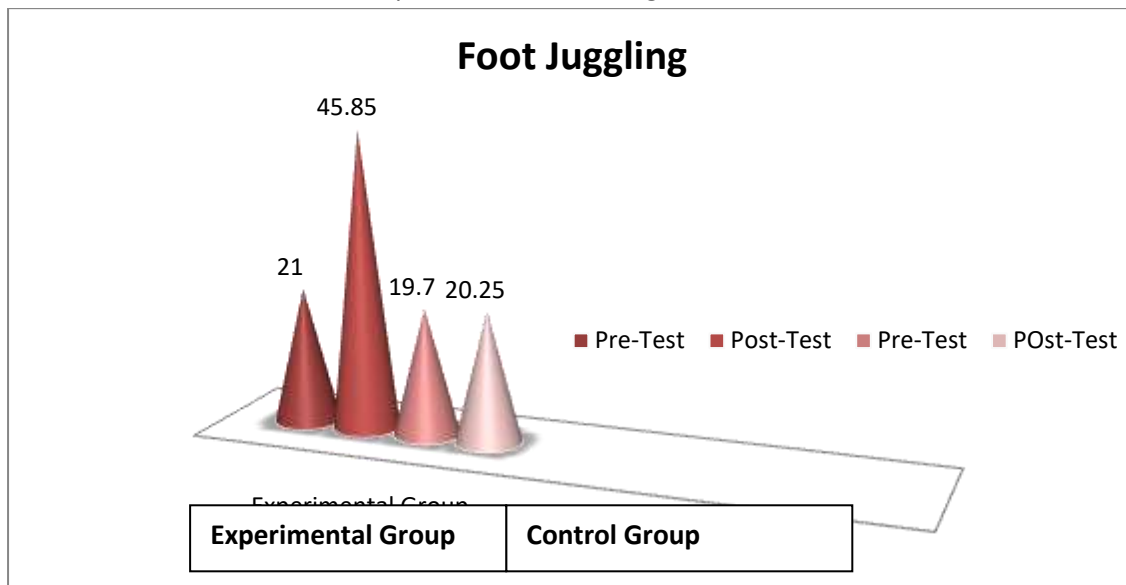


Figure-11. Means Comparison of Pre and Post Test for Foot Juggling of Experimental and Control Group

DISCUSSION OF FINDING

The training programmed of LTG for six weeks has been found significant improvement on dribbling and foot juggling of soccer players as the obtained t-values were found as 17.99 and 11.64 respectively greater than the tabulated $t_{(1,19)} = 2.093$. This is possible because due to regular training of LTG may bring sudden spurt which assess dribbling ability while accelerating with quick changes of multidirectional sprints, agility, speed etc. The results might be due to Ladder training enhances the dribbling skills of the players because there is a combination of coordination, agility, and speed activities. These activities can increase the dribbling capacity and ball control of the players. (Murugavel and Giridhara, 2020), in their study in which they examined the effect of 12-week ladder training on various skills of football players, reported that ladder training positively affected the dribbling skills of football players.

Also ladder training provide stimulus through the leg and core of the body used to increase food speed juggling which correlates into movement of soccer players. The result might be due to ladder training help to develop the more accurate balancing, coordination, controlling the

footsteps and any movement of the football players. Therefore, ladder training helps the ball control and juggling accuracy skill performance of the soccer players. To raise the standard of the game, the coaching processes are abreast with the latest training means and method. Players have to be prepared for specific skills and then receive training to improved their skills (Singh,2012).

Hence it is concluded from the results of the study that systematically and scientifically designed LTG may be given in the training programmes of soccer players in order to achieve skill-related performance. The finding of the present study have strongly indicated that regular training of LTG for six weeks has significant effect on dribbling and foot juggling of soccer players. Hence, the hypothesis earlier set, in light of the finding was accepted.

CONCLUSIONS

1. There were significant differences between experimental group and control group means of dribbling and foot juggling after specific ladder training.
2. And also it was found that there was a significant improvement on selected skill-related performance such as dribbling and foot juggling due to ladder training.
3. Ladder training might be recommended as training programmed for the improvement of skill performance of soccer players.

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