

EFFECT OF SELECTED EXERCISES ON THE PERFORMANCE OF KICKING ACCURACY IN FOOTBALL PLAYERS

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ABSTRACT

Kicking accuracy is an important component of successful penalty kicks, which may be influenced by the approach angle. The purpose of this study was to examine the effects of Selected Exercises on the Performance of kicking Accuracy in Football Players. The experimental study was made on thirty (30) male subjects. All the subjects were divided into equal groups of 15 (fifteen) subjects in each. One was experimental group; the second one was control group. The investigator was prepared a suitable training programmed for the experimental group the prescribed selected exercises (hopping, rope skipping, squat with weight, steps up with weight). Duration of the training programmed was 6 days in a week for a period of 6(six) weeks with 45 minutes each day. The control group did not practice any selected exercise during training period of six weeks. The significance of difference between the pre and post means of experimental group was 3.21 (place kick) and 2.08 (rolling kick), which was much greater than the require value at 0.05 level of confidence ($t= 2.048$). It showed that significant improvement in kicking accuracy in case of right place kick and rolling kick in football of experimental group. But in case of control group no significance difference found between the pre and post test of kicking accuracy (place kick and rolling kick) in football. Therefore, it indicated that specific exercises are significant changes on kicking accuracy in football for the experimental group in case of place kick and rolling kick. The finding of the study shows that there is no significant improvement in control group due to lack of training.

Keywords: Performance, Accuracy, Kick, Football Players, Males

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INTRODUCTION

Football is the most world famous game and watched by many of the fans globally. More than 200 million people worldwide play this game. Soccer, fuss ball, football, whatever this game with round leather ball may be called in various languages. It breaks the barriers of culture, caste, creed, ethnicity, religion and language, soccer is the national game of nearly every country in Asia, Africa and South America. Argentina, Brazil, England, Germany, Italy etc are football giants. It also brings national integration and also results in brother hood relationship among the international countries. It is such as powerful game that a player needs lot of strength and endurance to survive in the game. At International level FIFA is the governing body of football who frames the dales and regulation regarding the game.

Football was introduced to India by British soldiers in the mid-nineteenth century. It spread because of the efforts of Nagendra Prasad Sarbadhichary. In 1888 the Durand Cup was founded by then India's Foreign Secretary, Mortimer Durand at Simla, India. The Durand Cup is the third oldest football competition behind the FA Cup and the Scottish Cup. Calcutta, then capital of British India, soon became the hub of Indian football. In 1889 India's oldest current team Mohun Bagan A.C. was founded as Mohun Bagan Sporting Club. This was the first club to be under the rule of the army. Several football clubs like Calcutta FC, Sovabazar and Aryan Club were established in Calcutta during the 1890s. Tournaments like the Gladstone Cup, Trades Cup and Coochbehar Cup also started around this time. The first Indian Federation, the Indian Football Association, was founded in 1893 but did not have a single Indian in the board.

Although the football is primarily a physical game, the bodily benefit afforded the player are by no means the only ones he receives. It does afford the player better opportunities for physical development than any other sport. In most other branches of competitive athletics only parts of the body are brought into exercise. In football all muscles are used alike. The arms, legs, and back are all required to their work.

The running and swift succession of plays develop the endurance. In every possible way the muscles of the player are hardened. Football players do not become slow, muscle-bound men. They develop into smooth, enduring athlete. The physical development derived from football is readily shown by the charts of college trainers, giving the physical measurements of football player before and after they have become veterans. In every case the measurements show a remarkable growth in strength, size and symmetry for the athlete. Football teams are trained by skilled men whose sole duty it is to see that each player is fit to do his part in the game. Football is being made more force. All this tends to eliminate the liability of serious injury to the player and at the same time affords him the very best opportunity for physical development.

Many health of playing soccer researchers say that soccer is a sport that effective for controlling high blood pressure. And some research shows, playing soccer can build self esteem for children and also improves physical fitness. As play during soccer is continuous, soccer is great for fitness and cardiovascular health. People of various ages and skill levels can participate in soccer, with individuals of various sizes being able to do equally well. Soccer can also be a great sport for kids who may not have high levels of athletic ability, but who would like to participate in team sports.

Kicking accuracy is an important component of soccer performance, and can be defined as the ability to kick the ball at a specified area. Kicking movement in football is a relatively easy series of rotational movements. In this movement, the aim is to produce through the kinematics chain of body segments, high angular velocity to the foot. The length of the body segments or the radius of rotational movements influences the linear velocity of the rotating foot. Thus the body height and lengths of different body segments are an advantages are an advantages feature for players, because the linear velocity of rotating levers can be expressed as a product of the radius of rotational movement and angular velocity.

The role of the arms in kicking is primarily to maintain the balance of the body. The arms are usually extended out to the sides of the body during the forward motion of the kicking leg, to help to keep the center of gravity over the support foot, and to increase the moment of inertia of the trunk and increase resistance to rotation around the spin, or the long axis of the body. As the kicking foot contacts the ball, the opposite arm moves forward and upward across the body to help keep the trunk down and the body in balance. As the most frequently used element of play, kicking is the conscious passing or placing of the ball using inside/outside of foot, inside/outside of the instep, full instep, toe, knee or heel as the situations demand. It is a player's most valuable technical asset.

The aim of the study was to investigate the effect of selected exercises on the performance of kicking accuracy in football players. It was also hypothesized that the selected exercises will be helpful to improve the kicking accuracy of college level football player.

Scurr and Hall (2009) concluded that altering an individual's self-selected approach angle at recreational level did not improve kicking accuracy or ball velocity, despite altering aspects of underlying technique. Hassan Ali (2009), showed that the fatigue protocol affected the vertical displacement of corridor Z-axis in the right toe and the right heel. Young, et.al. (2010) showed that after the exercise bout, the fitter group had significantly better KA than the less fit group, and the more experienced players were 16% more accurate than the less experienced group. The midfielders were 8.2% better than the forwards/backs in KA. Young and Rath (2011) reviewed the studies on strength training. They explained that the foot velocity and kicking performance can be enhanced by supplementary programmes to regular football training, especially in non elite athletes. Potentially valuable training includes plyometrics, exercises that simulate the whole kicking action, and kicking weighted balls. Pepping, et.al. (2011) explained that the participants mainly used inside-foot pass-kicks with little to no height over the entire range of distances when the task was to perform pass-kicks into a stationary goal. The paper outlines these results in terms of the perception of (social) affordances for passing in football. Bjelica, Popovic and Petkovic (2011) demonstrated that the young football players have much more uniformed legs at the expense of accuracy when fatigued and kick the ball with the maximal intensity. It means a state of fatigue can affect the tested accuracy of instep kicking with the maximal intensity. Tirumala & Motimath (2014), indicated that the significant improvements in post-intervention kicking accuracy were found when males and females were treated as a single group. The two-week resistance tube exercise program was found to have an effect on kicking accuracy, vertical jump height and 40-yard technical test performance in competitive football players. Hadi and Ali (2012) resulted in the positive impact of the proposed training program on improving the penalty

kick accuracy. Sterzing (2010), defined the kicking action of soccer which has gained huge interest within the scientific community with respect to practice, coaching, science and technology. Additionally, it refers to a fairly new research aspect, the influence of soccer footwear on the kicking movement and consequently on kicking success as it has been shown that soccer footwear alters the biomechanics of kicking.

METHODOLOGY

Selection of Subjects:

For this study the researcher has selected the male students from college level players in Malda district, West Bengal. For these study 30 male subjects was selected randomly and all the subjects belong to different socio economic backgrounds and the environmental conditions, daily routine work of the subjects were same. Their ages varies from 18-27 years.

Description of Tests:

1. PLACE KICK

Eighteen feet (18 feet) line marked in front of the goal post and its divided in three parts 5,8,5 feet, a kick point is marked 12 yards apart from the 18 feet line. The subject has ten trials from a distance of 12 yards with the use of instep kick. Scoring: Two (2) points are awarded when ball passed through the 5 feet mark area, and one (1) point is awarded when ball passed through the 8 feet area. If the ball goes outside of the 18 feet goal area 0 point given. Total points of ten trials are the score of the subject.

2. KICKING A ROLLING BALL

For the administration of this test goal area and penalty area are used. The subject stands on point A and B, and examiner stand on C and D point. Examiner roll the ball from point C and subject run from point B and kick the ball towards the goal, in this way from opposite corner also. The subject has kicks five trials from each corner. Scoring: Two (2) points are awarded when ball passed through the 6 yards area, and one (1) point is awarded when ball passed through the 8 yards area. Total points of ten trials are the score of the subject.

Administration of Test:

All the subjects are divided into two groups of 15 subjects in each group. One is treated as Experimental group and second one is control group. The experimental group is instructed to practice selected exercises (hopping, rope skipping, squat with weight, steps up with weight) six days in a week for duration of six weeks. Before involving their training program pre test and after the training post test were administered to measure kicking accuracy of both the group with the help of Heath and Rodger's soccer Test. Data for kicking accuracy of football players before and after the training program was collected through administration of Heath and Rodger's test

Statistical Analysis

The collected data before and after the training program, kicking accuracy scores of football players were analyzed by using t- test statistical technique at 0.05 level of significance.

RESULTS AND DISCUSSION

To investigate the kicking Accuracy in Football Players of Malda District, the means, standard deviations, t-ratios were computed for experimental and control groups on place

kick and rolling kick performance and data pertaining to this have been presented in Table 1 and 2 and depicted in Figure 1 and 2.

TABLE 1
MEAN DIFFERENCES BETWEEN THE PRE AND POST TEST SCORE OF
EXPERIMENTAL AND CONTROL GROUP
OF PLACE KICK

Group	Test	M ₁ & M ₂	SD ₁ & SD ₂	MD	t-value
E.G	Pre test	8.46	1.30	1.67	3.21*
	Post test	10.13	1.54		
C.G	Pre test	8.20	1.34	0.14	0.26
	Post test	8.06	1.58		

*Significant at .05 level

t.05 (28)=2.04

Table-1 showed that mean differences between the pre and post test score of experimental and control group of place kick also reveals that the significance of difference between the pre and post means of experimental group was 3.21, which was much greater than the require value at 0.05 level of confidence (t= 2.04). It showed that significant improvement in kicking accuracy in case of right place kick in football of experimental group. But in case of control group no significance difference was found between the pre and post regarding the kicking accuracy (place kick) in football..

Therefore, it indicated that specific exercises are significant changes on kicking accuracy in football for the experimental group in case of place kick. Hence the null hypothesis is accepted.

The finding of the study shows that there is no significant improvement in control group due to lack of training, strength of the leg muscle and endurance and co-ordination may not be developed in the subject.

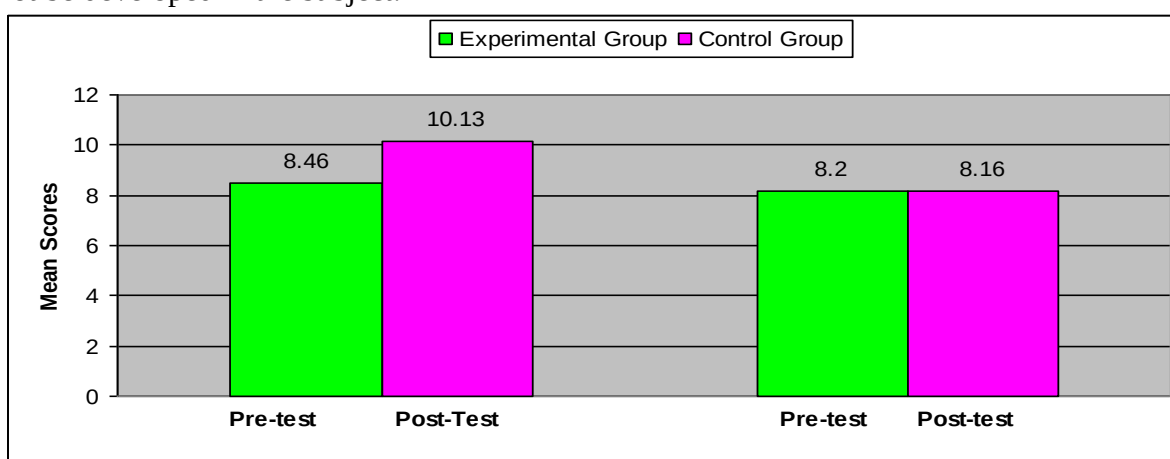


Figure :1. Mean Scores of Pre and Post Tests of Place Kick Accuracy of Experimental and Control Groups Male Football Players

TABLE 2
MEAN DIFFERENCES BETWEEN THE PRE AND POST TEST SCORE OF
EXPERIMENTAL AND CONTROL GROUP
OF ROLLING KICK

Group	Test	M ₁ & M ₂	SD ₁ & SD ₂	MD	t-ratio
E.G	Pre test	7.6	1.01	1.0	2.08*
	Post test	8.6	1.57		
C.G	Pre test	7.7	1.12	0.2	0.43
	Post test	7.9	1.43		

* Significant at .05 level
 $t_{.05}(28) = 2.04$

Table-2 show that mean differences between the pre and post test score of experimental and control group of rolling kick also reveals that the significance of difference between the pre and post means of experimental group was 2.08, which was greater than the require value at 0.05 level of confidence ($t = 2.048$). It showed that significant improvement in kicking accuracy in case of rolling kick in football of experimental group. But in case of control group no significance difference found between the pre and post regarding the kicking accuracy of rolling kick in football.

Therefore, it indicated that specific exercises are significant changes on kicking accuracy in football for the experimental group in case of place kick. Hence the null hypothesis is accepted.

The finding of the study shows that there is no significant improvement in control group due to lack of training, strength of the leg muscle and endurance and co-ordination may not be developed in the subject.

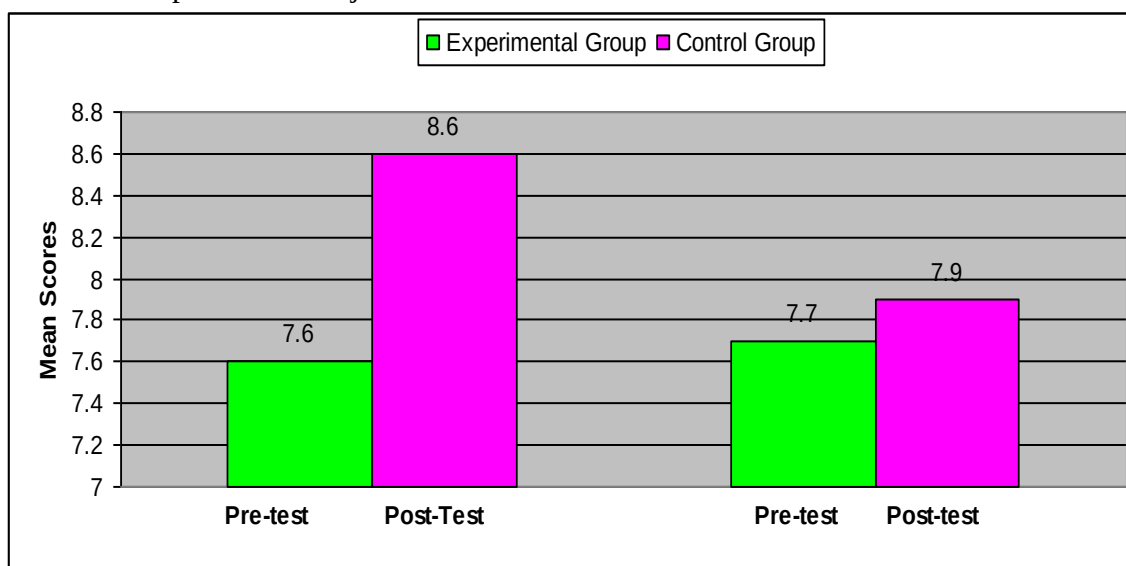


Figure :2. Mean Scores of Pre and Post Tests of Rolling Kick Accuracy of Experimental and Control Groups Male Football Players

DISCUSSION

The specific exercises had significantly improved on the kicking accuracy in football in case of place kick as well as rolling kick. This may be due to the fact that rope skipping, half squat with weight, one leg hopping, steps up with weight which are may be helped to increase the muscle strength of the legs, co-ordination between the different organs of the body, perception ability to improve the kicking accuracy in football of the experimental group.

The experimental group had significant improvement in kicking accuracy in football in case of place kick as as well as rolling kick after the period of six weeks training programmed. It might be reason that prescribed specific exercises has got significant influence on muscle contraction and relaxation ability, co-ordination of central nervous system and whole body co-ordination might be properly function.

CONCLUSIONS

1. Statistically Significant difference was observed between the pre and post means of experimental group on the accuracy of place kick of football players.
2. Significant difference was not found between the pre and post means of control group on the place kicking accuracy of football players.
3. Statistically Significant difference was observed between the pre and post means of experimental group on the accuracy of rolling kick of football players.
4. Similarity was indicated between the pre and post means of control group on the accuracy of rolling kick of football players

APPLICATION IN SPORTS

It was hope that the study will be helpful for improving the kicking accuracy of college students in football. The study will be helpful for the football coaches to adopt these selected exercises to improve kicking accuracy. The study will be helpful for the physical education students to adopt these selected exercises to improve kicking accuracy of football players.

FUTURE DIRECTION FOR RESEARCH

From the finding of the study it is also recommended that a study might be carried out with other variables. Similar study may be carried out on female subjects. A study may be conducted on soccer players of different age group. A study might be conducted on other game also. A similar study may be conducted on high school level. It is also recommended that similar study may be conducted on a large population for the other parts of the country.

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