



Relation Between Some Selected Soccer Skills With Some Anthropometric Measurements of Hill Area Teenage Male Soccer Player

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ABSTRACT

Background: The objective of the study is to establish a relation between the three selected soccer skills with three selected anthropometric variables.

Method: 100 teenage male soccer player of Kolkata SAI & Birbhum district of West Bengal were voluntarily participated for the study, whose age ranged from 14 to 17 years. Dribbling, kicking for distance and shooting for accuracy were considered as soccer variables and calf girth, thigh girth, upper arm girth were considered as anthropometric variables. For this study random group design is adopted. Pearson's Product Moment Correlation method is used to investigate the significant relation between the soccer skills and three anthropometric variables.

Results: The results reveals that dribbling have significant relation with thigh girth and kicking for distance have significant relation with thigh girth and upper arm girth upper arm girth .

Conclusions: It is concluded that anthropometric variables are important for the improvement of soccer skills.

KEYWORDS : Soccer skills, Teen age, Anthropometric measurements.

Introduction

Soccer has become a very popular game in the world. Almost all the nations play the game both for enjoyment and competition. Modern soccer is very fast by its nature. The spectators and the players enjoy the game of soccer with a great amount of merriment. It is a game of constant action and requires continuous adaptation to changing situation by the team as a whole as well as by the individual players. All though it is a team game, ample rooms for players to display their brilliance through individual performance with ball as well as through team play involving improvisation and tactical knowledge.¹

Effect of high altitude on performance has been mentioned that performance may actually be improved at high altitude in certain type of activity that are of short duration because of the reduced air resistance. The reason for that sprint activities are powered largely by anabolic metabolism and hence are not greatly affected by the reduction in oxygen availability. Aerobic power (max oxygen uptake) is on the other hand reduced at high altitude. This means that intensity of work that can be performed in a steady state (such as distance running events) is re-metabolism at lower level of exertion. In the Mexico city Olympics, there was either improvement or no improvement of performance in running events up to 400 meters. There was improvement about three person in the 800 meter run and 10% in the 5000 and 10000 meter events. It is also observed that the time required for recovery after event was much greater in Mexico city than at sea level. Exercise of strength is like sprint activities powered largely by anaerobic metabolism and are therefore not appreciably affected by high altitude.²

Generally most of the field of hill areas are situated on the top of the hill or mountain. And for this reason the boys & girls of hill area cover most of way by walking, their lower body mass and muscular endurance naturally improved.

Dribbling is a method of advancing the ball forward by a series of short kicks with the feet. The ball is most frequently propelled by the outside of the instep, and more rarely by the inside and the instep. The basic purpose of the dribble is to maintain the possession of the ball.³

Objective:

The objective of the study is to establish a relation between the three selected soccer skills with three selected anthropometric variables.

Methodology:

Subject : Hundred teenage male soccer player from Shillong and Halfong (N.C Hills) hill area were the subject of this study. The age of the subject were ranged from 14 to 17 years.

Variables : Three soccer skills namely dribbling, kicking for distance

and shooting for accuracy were considered as soccer variable. And three anthropometric variables such as calf girth, thigh girth and upper arm girth were also considered to establish a relation.

Experimental Design : For this study random group design is adopted. The subjects were randomly chosen from Shillong and Halfong hill area.

Statistical Analysis : Pearson's product moment correlation method is used to investigate the significant relation between the soccer skills and three anthropometric variables.

Test Administration

Dribbling

Procedure : The subjects were asked to stand behind the restraining line with a soccer ball. On signal 'go' and simultaneously click of the stop watch the subject started zigzag dribbling with ball in between six cones, then move forward 3 meters, take a right turn, dribble straight for 5 meters and again take a right turn and dribble by rolling the ball straight for 5 meter up to the end line.

Scoring : The time taken to the nearest 1/10th of a second is recorded as the score for each subject. The average of three trials considered as score.

Kicking for distance

Procedure : The subjects were asked to kick the ball as far as possible behind a marked line with the inside or inside of the instep of the foot.

Scoring : The distance from the restraining line to the spot where the ball landed first is measured as one's score. The average of three trials was taken as the score.

Shooting for accuracy

Procedure : The ball was kept on the penalty spot and a subject stood behind the penalty spot facing towards the goal.

The goal post was divided by cones to 5 equal zones (i.e. 7.32 m. is divided by 5) and a point system is labelled with the zones. The 1st and 5th zones from any side [right/left] were marked for 5 points, 2nd and 4th zones marked for 4 points and the middle or 3rd zone was marked for three points. All subjects were instructed about the point system of their scoring ability. Every individual were given three (03) chances.

Scoring : Total points of all three trials is recorded as the score.

All the three skills are demonstrated by the investigator himself and allowed them to practice for several time. They also verbally well in-

structed by their coach in their local languages.

The anthropometric measurements were taken prior to the skill test. Non stretchable steel tape is used for the measurement of calf girth, thigh girth and upper arm girth.

Discussion & Findings:

**Table – 1
Mean and standard deviation of the three (03) soccer skills of the teenage male soccer players of hill area.**

	Mean	S.D
Dribbling	10.30	1.04
Kicking for distance	42.75	7.49
Shooting for accuracy	3.36	0.87

Table – 2 Mean and standard deviation of the three (03) anthropometric variables of the teenage male soccer players of hill area.

	Mean	S.D
Calf girth	33.91	1.39
Thigh girth	50.01	3.65
Upper arm girth	24.63	1.56

Table - 3 Relationship between three soccer skills with the anthropometric variables of teenage male soccer players of Hill area :

	Calf girth	Thigh girth	Upper arm girth
Dribbling	.076	-.352**	.053
Kicking for distance	-.018	.595**	.324**
Shooting for accuracy	-.186	.015	.079

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Tabulated “r” = 0.195

The results obtained from the analysis of data from the above table expose that the soccer performance variable i.e. dribbling were significantly related with thigh girth (-0.352), the obtained values of co-efficient correction are higher than the Tabulated value (r = 0.195). Table also shows that dribbling were insignificantly related with calf girth (.076) and upper arm girth (.053) since the obtained values of co-efficient correlation are lesser than tabulated value (r=0.195).

In case of kicking for distance thigh girth (.595) and upper arm girth (.324) were significantly related, as obtained values of co-efficient correlation are higher than the tabulated value (r=0.195)

Whereas the kicking for distance was insignificantly related with calf girth (-.018) and shooting for accuracy was insignificantly related with calf girth (-.186), thigh girth (.015) and upper arm girth (.079) as the obtained values of the co-efficient correlation are lesser than the tabulated value (r=0.195).

This study is in consonance with the finding of Bandhyopadhyay ⁴ and Rosenicx ⁵.

Conclusion:

So from the above discussion it is observed that thigh girth plays an important role in dribbling and kicking skill of soccer.

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