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Investigation of Selected Physical Variables to Overhead Clearance in Badminton

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Abstract – The purpose of the study was to investigation of selected physical variables to overhead clearance in badminton. Twenty (20) male badminton players who took part in state level badminton tournaments. The selected physical variables were shoulder strength, leg strength and grip strength. The scores for selected physical variables were obtained by using the standard tests namely, medicine ball put for shoulder strength, leg strength for leg dynamometer and grip strength measured by grip dynamometer. Miller Wall-Volley test was used to measured overhead clearance in badminton. To investigation of selected physical variables to overhead clearance in badminton, Karl Pearson's Product Moment Correlation was employed. It is concluded that the following physical variable were found not significantly related to overhead clearance in badminton.

Keywords: Physical Variables, Overhead Clearance and Badminton.

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INTRODUCTION

The game created in British India from the prior round of battledore and shuttlecock. European play came to be overwhelmed by Denmark however the game has gotten exceptionally famous in Asia, with ongoing rivalries overwhelmed by China. Since 1992, badminton has been a Summer Olympic game with four occasions: men's singles, ladies' singles, men's copies, and ladies' doublez with blended duplicates added four years after the fact. At significant degrees of play, the game requests great wellness: players require high-impact endurance, deftness, strength, speed, and accuracy. It is additionally a specialized game, requiring great engine coordination and the improvement of modern racquet movements. The motivation behind the forehand clear is utilized to compel your rival to the back court. It very well may be played as an assaulting shot or as a guarded shot. The assaulting clear is hit quicker and compliment into the back corners. The protective clear is hit a lot higher and in spite of giving your rival time to get behind the van – it additionally gives you more opportunity to return to a base position. The overhead clear is played with a tossing activity. To execute the shot turn sideways on with the non racket foot forward. Set up the racket by coating the racket head and the non racket hand up, pointing towards the van. Follow the line of the van back with racket and hand until not long before the bus is in hitting range. In competitive play, the forehand clear is employed as either an attacking shot or defensive shot, with the aim of driving your opponent to the rear court. With the attacking clear, the shuttle travels fast and flat running almost parallel to the ground towards your opponent's rear court. As these shots are generally executed with more speed, your opponent would have less time to react, returning weak shuttles to your advantage. The defensive clear as its name implies, is defensive. It is used when you're put in a difficult spot and need to buy time for yourself. The difference lies in its trajectory. The defensive clear has a high and deep trajectory, causing the shuttle to take a longer time to reach your opponent. Even though it would give your opponent more time to position himself to receive the shuttle, it also gives you more time and allows you to return to your base position (GC006 link) in preparation for your next shot. In serious play, the forehand clear is utilized as either an assaulting shot or cautious shot, with the point of driving your rival to the back court. As these shots are for the most part executed with more speed, your adversary would have less an ideal opportunity to respond, returning powerless transports for your potential benefit. The cautious demonstrate as its innocence suggests, is guarded. It is utilized when you're placed in a troublesome spot and need to purchase time for yourself. The distinction lies in its direction. The cautious clear has a high and profound direction, making the bus set aside a more extended effort to arrive at your rival. Despite the fact that it would give your adversary more opportunity to situate himself to get the van, it likewise gives you

additional time and permits you to get back to your base position in anticipation of your next shot.

METHODOLOGY

Twenty (20) male badminton players who took part in state level badminton tournaments. The average age of the players was twenty one to twenty five years. The selected physical variables were shoulder strength, leg strength and grip strength. The scores for selected physical variables were obtained by using the standard tests namely; medicine ball put for shoulder strength and score was taken by the distance covered by throwing medicine ball back side in meter. Leg strength was measured with a leg dynamometer and the score was recorded to the nearest kilogram. Grip dynamometer was used to measure grip strength of the subject and the score was recorded to the nearest kilogram. Miller Wall-Volley test was used to measure overhead clearance in badminton. To investigation of selected physical variables to overhead clearance in badminton, Karl Pearson's product moment correlation was employed at 0.05 the level of the significance.

FINDINGS

To investigate relationship of selected physical variables to overhead clearance in badminton, Karl Person's Product Movement correlation was used and the physical variables were considered as independent variables, whereas the overhead clearance in badminton was considered as dependent variables.

Table No .1

Descriptive Analysis of Physical Variables and Overhead Clearance

Variables	Range	Minimum	Maximum	Mean	Std. Deviation
Overhead clearance	30	57	87	73.1	8.01
Shoulder strength	2.1	4.25	6.35	5.37	0.58
Leg strength	47	115	162	134	11.83
Grip strength	27.4	30.6	58	42.725	6.86

Table no.1 indicates that descriptive analysis of physical variables of badminton player's range, minimum, maximum, mean and standard deviation were discribed in details. For players's overhead clearance in badminton's range was 30, minimum was 57, maximum was 87, mean was 73.1 and standard deviation was 8.01. For shoulder strength of players, range was 2.1, minimum was 4.25, maximum was 6.35, mean was 5.37, and standard deviation was 0.58. For leg strength of players, range was 47, minimum was 115, maximum was 162, mean was 134 and standard deviation was 11.83. For grip strength of players, range was 27.4, minimum was 30.60, maximum was 58, mean was 42.72, and standard deviation was 6.86. Correlations between selected physical variables and overhead clearance in badminton have been presented in table no. 2.

Table – 2

Relationship of Selected Physical Variables to Overhead Clearance in Badminton

S. No.	Variables Correlated	Coefficient of Correlation 'r'
1	Shoulder strength	0.164
2	Leg strength	0.083
3	Grip strength	0.036

*Significant at 0.05 level of significance $r_{0.05}$ (18) =0.444

Table no.2 indicated that badminton playing capacity was insignificantly related to shoulder strength (r =.164), leg strength (r =.083) and grip strength (r =.036), as their correlation value was less than the required value of 0.444 required for correlation 0.05 the level of significance. Graphical representation of table no. 2 has been presented in figure-1.

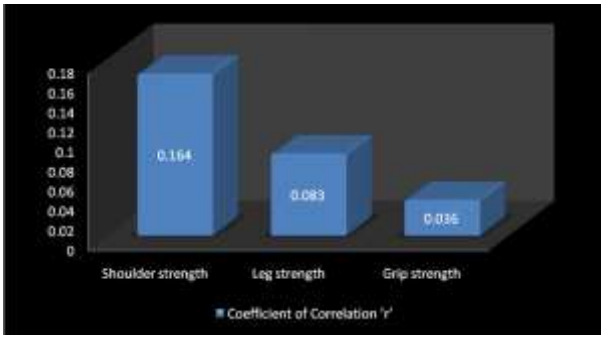

Figure no. 1: Relationship of Selected Physical Variables to Overhead Clearance in Badminton

DISCUSSION AND CONCLUSION

The selected physical variables to overhead clearance in badminton were recorded by administrating appropriate test as well as utilization appropriate statistics. It was found that there is no significance relationship between shoulder strength, leg strength and grip strength to overhead clearance in badminton. On the basis of scores of this study it can be concluded that the selected physical variable probably determined overhead clearance in badmintons specially shoulder strength because it had maximum value rather than other. But in this case, due to small sample size these variables were not found significant relationship.

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