

# A Relationship Study of Selected Anthropometric Measurements to Overhead Clear Stroke in Badminton

**Bhartendu Sharma\***

Ph.D. Scholar, Department of Physical Education, Tripura University, Tripura

**Abstract –** *The objective of this study was to find out relationship of selected anthropometric measurements to overhead clear stroke in badminton. Twenty (20) male badminton players who participated in state level badminton tournaments. The anthropometric measurements were height, weight, leg length, arm length. The data on all the anthropometric measurements were collected by using standard procedure as available in literature. Miller Wall-Volley test was used to measured overhead clear stroke in badminton. Correlation statistics were applied to find out relationship of anthropometric to overhead clear stroke in badminton. Zero order correlation using Karl Pearson's product moment correlation was computed. It is concluded that the following anthropometric measurements were found not significantly related to overhead clear stroke in badminton.*

**Keywords:** *Anthropometric Measurements, Overhead Clear Stroke and Badminton*

## INTRODUCTION

The success of any program lies on the fact that how far and how its set objectives have been achieved. To ascertain the extent to which the set objectives have been achieved, the process of evaluation is applied. Evaluation is a judgment of merit, sometimes based solely on measurements such as those provided by test scores but more frequently involving the synthesis of various measurements, critical incidents, subjective impressions and other kind of evidence. Evaluating the amount of knowledge achieved skills developed and attitudes formed are an important function of teaching any subject or discipline. The extent of its importance can be visualized by the never-ending schemes and reports on examination reforms in the academic subjects. But evaluation is much more complicated in physical skills are too numerous such as physical fitness, motor fitness, motivation, intelligence, besides, instruction got from well-planned schemes of lessons. Further the criterion behavior in evaluating physical skills is not amendable to easily grading objectively, especially in the skills of sports and games which are depended equally on the circumstances of playing and physical skill of the players. But still there has been continued efforts made to scientifically construct valid, reliable and objective tests in v various sports activities by physical educators and athletic coaching professionals.

In physical education the process of evaluation employs the use of two types of tests i. e.

standardized tests and teacher made tests. The teacher made tests have the advantage of being pertinent to a particular group as the teacher is aware of what he has covered in the instruction and what he actually wants to assess. But these tests are not scientifically constructed and majority of the times these are criticized. Thus the need for standardized tests is much more vital as they are scientific in nature and can be applied universally for the concerned target group. Changes are the order of the day. Changes are taking place every day in every walk of life. Life of people, their philosophy, way of living etc. are undergoing changes due to basic and applied research in various field. Man has reached the space age from the primitive Stone Age because of continuous change. It is unwise to build a pyramid to the top without having build a base first; similarly specialization in a bunch of knowledge cannot be possible if the general concepts in the discipline are not clearly understood. This is very much practical so in case of physical education whose drills and techniques of any sports or game should be basically understood and mastered in the first instant.

## METHODOLOGY

Twenty (20) male badminton players, who had participated in the state level tournaments (M.P.) was selected as subjects for the study. The average age of the subjects was 18 to 25 years. The anthropometric measurements were height, weight, leg length, arm length. The data on all the anthropometric measurements were collected by using standard procedure as available in literature.

Height was measured by a stadiometer and recorded to the nearest half a centimetre. Weight was measured with a weighing machine and recorded to the nearest quarter of a kilogram. Arm length and leg length was measured with a steel tape and was recorded to the nearest half a centimeter. Miller Wall-Volley test was used to measure overhead clear stroke in badminton. To find out the relationship of anthropometric to overhead clear stroke in badminton, Karl Pearson's product moment correlation was computed. It is concluded that the following anthropometric measurements were found not significantly relationship to overhead clear stroke in badminton.

## RESULTS

In order to find out relationship between selected anthropometric measurements to overhead clear stroke in badminton, Karl Person's Product Movement correlation was used and the variables such as selected anthropometric measurements were considered as independent variables, whereas the overhead clear stroke in badminton was considered as dependent variables.

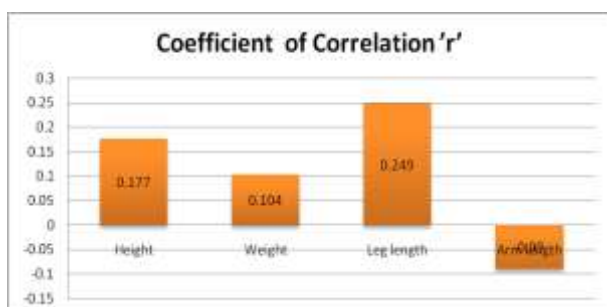
**Table - 1**

**Investigation of Selected Anthropometric Measurements to Overhead Clear Stroke in badminton**

S. No.	Variables Correlated	Coefficient of Correlation 'r'
1	Standing Height	0.177
2	Weight	0.104
3	Leg length	0.249
4	Arm length	-0.090

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

Table no.1 indicated that badminton playing capacity (overhead clear stroke) was insignificantly related to height ( $r = 0.177$ ), weight ( $r = 0.104$ ), leg length ( $r = 0.249$ ) and arm length ( $r = -0.09$ ) as their correlation value was less than the required value of 0.444 required for correlation 0.05 level of significance. Graphical representation of table no. 1 has been presented in figure-1.



**Figure No. 1: Relationship of Selected Anthropometric Measurements to Overhead Clear Stroke in Badminton**

## DISCUSSION AND CONCLUSION

The selected anthropometric measurements to overhead clear stroke in badminton were recorded by administrating appropriate test as well as utilization appropriate statistics. It was found that there is no significance relationship between standing height, weight, leg length arm length to overhead clear stroke in badminton. On the basis of results of this study it can be concluded that the selected anthropometric measurements probably determined overhead clear stroke in badminton. But in case of this study due to small sample size these variables was not found significant relationship.

## REFERENCE

- Speranza M.J. et. al. (2015). Muscular Strength And Power Correlates Of Tackling Ability In Semiprofessional Rugby League Players. *Journal Of Strength and Conditioning Research*. Aug;29(8): pp. 2071-8
- Comfort P, et. al. (2014) Relationships between Strength, Sprint, and Jump Performance in Well-Trained Youth Soccer Players. *Journal Of Strength And Conditioning Research* 2014 Jan; 28(1): pp. 173-7.
- PG Montgomery et. al. (2010). The Physical and Physiological Demands of Basketball Training and Competition, *International Journal Sports Physiology Performance*, Mar;5(1) pp. 75-86.
- Wormgoor et. al. (2010). Anthropometric, Biomechanical, and Isokinetic Strength Predictors of Ball Release Speed in High-Performance Cricket Fast Bowlers, *Journal of Sports Science*; 28(9) pp. 957-965.
- Stuelcken M. (2007) Anthropometric Characteristics of Elite Cricket Fast Bowlers, *Journal of Sports Science*, Dec; 25(14).
- Stuelcken M.C. et. al. (2008). Shoulder Strength and Range of Motion in Elite Female Cricket Fast Bowlers with and without a History of Shoulder Pain, *Science Medicine Sport*. Nov; 11(6).
- Blackwell J. & Knudson D. (2002). "Effect of Type 3 (Oversize) Tennis Ball on Serve Performance and Upper Extremity Muscle Activity". *Sports Biomechanics*. July; 1(2), pp. 187-92.
- J.B. Cronin and K.T. Hansen (2005). "Strength and Power Predictors of Sports Speed", *Journal of Strength Conditioning Research*. May; 19(2) pp. 349-57.

Verma J. Prakash: "Statistical Methods for Sports and Physical Education" (Tata Mc Graw Hill Education Private Limited New Delhi).

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**Corresponding Author**

**Bhartendu Sharma\***

Ph.D. Scholar, Department of Physical Education,  
Tripura University, Tripura