

# Comparison of Arm Strength among College Level Badminton and Tennis Players

Azad Singh<sup>1\*</sup> Baljeet Singh<sup>2</sup>

<sup>1</sup>Research Scholar, Jiwaji University, Gwalior (MP)

<sup>2</sup>Physical Instructor, National Law Institute University, Bhopal (MP)

**Abstract –** The aim of the study was Comparison of Arm strength among Badminton and Tennis players. Twenty badminton and Tennis players were selected as subject for this study who had participated in intercollegiate level tournament during year 2013 to 2015. To test the arm strength of the subjects Medicine Ball throw item of AAHPER was selected. The test was administrated in the Institute of Professionals Studies Gwalior (M.P.). To compare the arm strength profile of Badminton and Tennis players descriptive analysis and independent 't' test was use to test the null Hypothesis. The level of significant was set at 0.05. Within the limitations of the present study it was found of that there is no significant difference was found among Badminton and Tennis players in the mean of arm strength. The reason for batter performance in both the case are continues participation in same type of training program.

**Keywords:-** Comparison of Arm Strength Among Badminton and Tennis Players.

## INTRODUCTION

The world of games and sports has crossed many milestones as a results of different types of researches and a variety of scientific advancement in general their application in field of sports in particular. In the modern scientific age athletes are being trained by highly sophisticated means for batter achievements in their concerned sports. Muscular strength in necessary for all the physical activity from picking up your school bag to playing a lofted kick in Football. Though, as we have seen, strength, flexibility and endurance are all interrelated, fitness cannot be achieved without first developing sufficient strength. Physical variables like namely, arm strength, shoulder strength, grip strength, speed, agility, balance etc. The coaches and teacher of physical education wants to use training procedure without causing too much strain on them. This is possible only if coaches and teachers of physical education apply the most beneficial mean of training in the most economical manner for enhancing the performance of their athletes.

Badminton and Tennis both has racquet sports played by singles or doubles players a side. Both games players required specific type of muscular strength in their legs and arm for play the game more efficiently. For this purpose athletes do specific exercise developing muscular strength in arm and

legs muscles, so that athletes perform all storks gracefully.

## METHODOLOGY:

Twenty badminton and Tennis players were selected as subject for this study who had participated in intercollegiate level tournament during year 2013 to 2015. To test the arm strength of the subjects Medicine Ball throw item of AAHPER was selected. The test was administrated in the Institute of Professionals Studies Gwalior (M.P.). To compare the arm strength profile of Badminton and Tennis players descriptive analysis and independent 't' test was use to test the null Hypothesis. The level of significant was set at 0.05

## ANALYSIS OF DATA AND RESULTS OF THE STUDY:

In order to compare the arm strength among Badminton and Tennis players, data was analyzed by descriptive analysis followed by "t" test

TABLE NO. 1

**DESCRIPTIVE ANALYSIS OF ARM STRENGTH AMONG BADMINTON AND TENNIS PLAYERS**

Group	Maximum	Minimum	Range	Mean	Standard deviation
Badminton	10.80	7.90	2.90	9.03	0.293
Tennis	12.10	8.25	3.85	9.82	0.426

Above table indicate descriptive analysis of arm strength among Badminton and Tennis players. The maximum, minimum, range, mean and standard deviation of Badminton players are 10.80, 7.90, 2.90, 9.03 and 0.293 respectively. In case of Tennis players it is 12.10, 8.25, 3.85, 9.82 and 0.426 respectively.

TABLE NO. 2

**COMPARATIVE ANALYSIS OF ARM STRENGTH AMONG BADMINTON AND TENNIS PLAYERS**

GROUP	MEAN	STANDARD DEVIATION	STANDARD ERROR	MEAN DIFFERENCE	T-VALUE
Badminton	9.03	0.293	1.28	0.79	1.53
Tennis	9.82	0.426			

Significant at 0.05 level of significant' =2.101

Above table shows that there is no significant different of strength among Badminton and Tennis players as the obtained "t" value 1.53 is significant lesser than the tabulated "t" value 2.101 at the 0.05 level of significance.

Finding of the study show that there is no significant difference was found among Badminton and Tennis players in the mean of arm strength. The reason for batter performance in both the case are continues participation in same type of training program.

It was hypothesized that there will be no significant difference among Badminton and Tennis players which is accepted on the basis of available results at 0.05 level of significant.

**CONCLUSION:**

1. It is evident from analysis that there are very minor differences in the mean value of both the group i.e. 9.03 of Badminton players and 9.82 of Tennis players respectively.
2. Null hypothesis were accepted as there was no significant difference in arm strength among Badminton and Tennis players at 0.05 level of significance.
3. Further it is found that there was no significant different in both groups of Badminton and Tennis players in relation to arm strength.

**RECOMMENDATIONS:**

1. It is recommended that coaches and physical education must take into consideration such as arm strength while selecting Badminton and Tennis players.
2. Physical education teachers and coaches can arranged the same training program for improve the arm strength of Badminton players and Tennis players on the base of results of this study.
3. Similar study may be conducted by taking other variables.
4. Similar type of study can be conducted on other different level of subjects.
5. It is recommended that same study may be conducted on female subjects.

**BIBLIOGRAPHY:**

**Books**

Kamlesh, M.L. (2004). **Field Manual of Sports & Games**, Nageen Parkhashan.

Lawrence E. Moorehouse and Augustus T. Miller (1963). **Physiology of Exercise**. St. Louis: the C.V. Mosby Co.

Mathew K. Donald (1978). **Measurement in Physical Education**, Philadelphia: W.B. Saunders Company.

Singh Hardayal (1984). **Sports Training General Theory and Methods**, Patiala: Netaji Subhash National Institute of Sports.

### **Journal and periodicals**

Bcatice Sabol (1963). 'A Study or Relationship Among Anthropometric Strength and Performance Measures of College Women Bowlers', **Completed Research in Health physical Education and Recreation**, Vol.5, p.181.

Bhargava, A.S, Eapen C and Kumar, S.P. (2010). "Grip Strength Measurement at Two Different Wrist Extension Positions in Chronic Lateral Epicondylitis-Comparison of Involved Vs Uninvolved Side in Athletes and Non Athletes: A Case Control Study", **Journal of Sports Medicine, Arthroscopy, Rehabilitation, Theraphy & Technology**. Vol. 7. pp.2-22.

Brookham, R.L, Moreton, J.N, Dickerson, C.R. (2008). "Perception of Shoulder Muscular Effort During Low-Demand Load Transfer Tasks.", **Journal of Sports Medicine**, Vol. 16. pp. 417-24.

Jaster, Sally and Frazier Charles (1977). "Developing Power" **Athletic Journal**, Vol. 58. p.32.

### **Internet**

[http://en.wikipedia.org/wiki/physical\\_education](http://en.wikipedia.org/wiki/physical_education).  
retrieved on 16 March, 2015.

<http://en.wikipedia.org/wiki/tennis>. Retrieved on 21st  
January, 2015.

---

### **Corresponding Author**

**Azad Singh\***

Research Scholar, Jiwaji University, Gwalior (MP)

E-Mail – [baljeetsingh176@gmail.com](mailto:baljeetsingh176@gmail.com)