



# RELATIONSHIP BETWEEN MOTOR FITNESS PERFORMANCE OF FEMALE TABLE TENNIS AND BADMINTON PLAYERS

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**Abstract :** Motor fitness components play a vital role to enhance the performance of Badminton Players. Taking this point into consideration, the researcher investigated the relationship of selected motor fitness component's performance of Table tennis with Badminton Players. For achieving the purpose of this study 10 table tennis and 10 Badminton Female state-level players were selected as the subjects from Chandrapur district. Their age was ranging from 20 to 25 years. Data on Pull-ups – to measure arm and shoulder strength by using– a horizontal metal bar and the score was recorded in numbers, Standing broad jump–to measure explosive leg strength by using a mat, measuring tape, and the score was recorded in centimetres, Shuttle run–to measure agility and speed by using Wooden blocks of 2 x 2 x 4 inches, stopwatch, clapper and measuring tape and score was recorded in seconds. The level of significance was set at 0.05 to check the relationship obtained by Pearson's Product Moment Correlation. The findings of Statistical analysis revealed that Table tennis with Badminton Performance was shown a significant Correlation with arm and shoulder strength and explosive leg strength. But, there was an insignificant correlation in agility. Arm and shoulder strength and explosive leg strength were significantly correlated in Table tennis with Badminton performance. Agility did not show the significant relationship in Table tennis with Badminton Players performance.

**Keywords:** Arm and shoulder strength, Explosive leg strength, Badminton.

## I. INTRODUCTION

Many people participate in sports and games for happiness, pleasure, health and fitness. In modern life, they increase participation in sports. Though, motor ability is acquired and innate ability to perform motor skill of a general or fundamental nature (Clarke,1977). Every sports performance depend on varied factors viz. Anthropometric measurement, motor fitness, mental making up, social adjustment, balanced emotion, skill etc. Though each factor are equally important to contribute almost performance still motor fitness of the individual is consider most indispensable factors of sports performance (De Veries, 1978). Therefore scholar undertook study started as- Relationship of selected motor fitness components of performance of Table tennis with Badminton Players.

## II. PURPOSE OF THE STUDY

The main purpose of the present study was to determine The Relationship between Motor Fitness Performance of Female Table Tennis and Badminton Players Participating in minimum State level.

## III. HYPOTHESIS

It was hypothesized that, there would be significant relationship between Selected Motor Fitness Components with Performance of Interuniversity level Table tennis & Badminton Players.

## IV. METHODOLOGY

For the purpose of this study, total 20 Female State level player were selected 10 from Table tennis and 10 from Badminton Players of Chandrapur. The age of the subjects was ranging from 20-25 years. All subjects were selected by adopting Purposive Sampling method.

The Criterion measures chosen for the propose of the study were Pull ups – to measure arm and shoulder strength by using horizontal metal bar and the score was recorded in number, Standing broad jump -to measure explosive strength by using a

mat, measuring tape, and the score was recorded in centimeter, Shuttle run-to measure agility and speed by using Wooden blocks of 2 x 2 x 4 inches, stop watch, whistle and measuring tape and score was recorded in seconds.

## V. ANALYSIS OF DATA

Pearson's product moment correlation was used as the statistical technique to find out the relationship of selected motor fitness components with Badminton performance. All the data analyzed by Ms-Excel 2010. To test hypothesis, the level of significance was set at 0.05

## VI. RESULTS

The relationship of selected motor fitness components with performance in Badminton is presented in tables -1, 2, 3

**Table No. 1: Coefficient of Correlation between Arm and Shoulder Strength and Badminton Performance**

Shoulder Strength	Coefficient of Correlation (r)
Correlation Table tennis and Badminton Performance	0.829

Significant at 0.05 Level. Tabulated  $r_{0.05}(18) = 0.444$

The above table reveals that the obtained coefficient of correlation value for the arm and shoulder Table tennis and Badminton Performance is 0.829 which is greater than the tabulated r-value of 0.444 at 0.05 level of confidence for the 18 degree of freedom.

Hence, it is evident that, there is significant correlation between the arm and shoulder strength and Performance of Badminton Players.

**Table No. 2: Coefficient of Correlation between Explosive leg Strength and Badminton Performance**

Explosive leg Strength	Coefficient of Correlation (r)
Correlation Table tennis and Badminton Performance	0.466

\* Significant at 0.05 Level. Tabulated  $r_{0.05}(18) = 0.444$

The above table reveals that the obtained, coefficient of correlation value for the explosive leg Table tennis and Badminton Performance is 0.466 which is greater than the tabulated r-value of 0.444 at 0.05 level of confidence for the degree of freedom.

Hence, it is evident that, there is significant correlation between the Explosive leg strength and Performance of Badminton Players.

**Table No. 3: Coefficient of Correlation Between Agility and Badminton Performance**

Agility	Coefficient of Correlation (r)
Correlation Table tennis and Badminton Performance	0.186

Significant at 0.05 Level. Tabulated  $r_{0.05}(18) = 0.444$

It reveals that coefficient of correlation between Table tennis and Badminton is 0.186 which is less than the tabulated r-value of 0.444 at 0.05 level needed to be signified for 18 degrees of freedom.

Hence, it is evident that, there is insignificant correlation between the Agility and Performance of Badminton Players.

## VII. DISCUSSION ON FINDINGS

The result of the present study showed the Badminton Performance was significant correlated with Table tennis in arm and shoulder strength ( $r = 0.829$ ) and Explosive leg strength ( $r = 0.466$ ). It may be attributed to the fact that the maximum shoulder strength helps in arm shoot; the explosive leg strength. It leads to increase faster spike jump and assist to take a good dive. Hence such result might have occurred in this study.

## VIII. DISCUSSION ON HYPOTHESIS

In the beginning it was hypothesized that, there would be significant relationship of selected motor fitness performance of Table tennis with Badminton Players. Basis on statistical findings, hypothesis stated earlier is partially accepted i.e. in the case of, arm and shoulder strength and explosive leg strength hypothesis is accepted, whereas in the case agility hypothesis is rejected.

## XI. CONCLUSION

Considering the limitations of the study and on the basis of statistical findings it is concluded that arm and shoulder and explosive leg strength were significantly contributed to Table tennis and Badminton performance. Agility did not show significant relationship with performance of Badminton Players.

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