

## **AN ESTIMATION OF BADMINTON PERFORMANCE BASED ON SELECTED PHYSICAL FITNESS COMPONENTS**

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### **ABSTRACT**

*This study aimed to determine the correlation between independent variables (physical fitness components) and dependent variables in badminton performance. To study the joint contribution of independent variables in predicting dependent variables and establish regression equations for predicting dependent variables based on independent variables. Selected variables were physical fitness components - cardiovascular endurance, explosive strength, flexibility, speed, and coordinative ability. Methodology: - For this study, forty All-Indian University Female Badminton players who came to participate at All India Inter University tournament were selected. The age ranged between 18 and 25 years for the subjects. Badminton match performance was considered as the dependent variable. The selected physical fitness Variables were measured by different tests. To find out the correlation between Independent Variables (physical fitness components - cardiovascular endurance, explosive strength, flexibility, speed, coordinative ability) and Dependent variables (Badminton performance), the Product Moment Method of correlation was used. To study the joint contribution of Independent Variables in estimating Dependent Variables, the Multiple correlation method was used. A regression equation was established for predicting Dependent Variables based on Independent Variables. Findings: - There exists a significant relationship between badminton match performance and flexibility. There exists an insignificant relationship between badminton match performance and cardiovascular endurance, explosive strength, Speed, and coordination ability. The regression equation for badminton match performance, four-corner agility test, Speed, Sideway agility test, Cardiovascular Endurance, Flexibility, and Explosive strength was found beneficial in estimating Badminton match performance based on selected independent variables (cardiovascular endurance, explosive strength, flexibility, speed, coordinative ability).*