

**16 RELATIONSHIP OF SELECTED KINEMATICS VARIABLES WITH THE PERFORMANCE OF BACK COURT SPIKE IN VOLLEYBALL**

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The purpose of this study was to examine the relationship of selected kinematic variables with the performance of back court spike in volleyball. The subjects (5 M, age 20–24 years) participated in All India Inter University Volleyball. Pearson product moment correlation was used to analyse the linear (height of centre of gravity (CG) of the body and ball) and angular kinematic (angles of shoulder, elbow, hip, knee and ankle joints) variables at the moment of ball contact. The results have shown that the values of the co-efficient of correlation are at right ankle joint (–0.843), left ankle joint (–0.651), right knee joint (0.879), left knee joint (–0.593), right hip joint (–0.298), left hip joint (–0.081), right elbow joint (0.884), left elbow joint (–0.720), right shoulder joint (–0.560), left shoulder

joint ( $-0.815$ ), height of CG of body ( $0.112$ ) and height of CG of ball ( $0.497$ ) whereas tabulated value of 3 degree of freedom at 0.05 level of significance is 0.87. Value of coefficient of correlation in case of the angle at right elbow and right knee joint has shown the significant relationship whereas other selected biomechanical variables show an insignificant relationship at the 0.05 level of significance.