

KINEMATIC COMPARISON OF THREE POINT SHOT AFTER FIRST AND FOURTH QUARTER IN BASKETBALL

***Kumar Santosh **Ghai Guru Datt and ***Joshi Hem Chandra**

1. Physical Education Teacher, Department of Physical Education and Sports, K.V.S., Raurkela, Orissa, **INDIA**.
2. Professor, Department of Sports Biomechanics, L.N.I.P.E., Gwalior, Madhya Pradesh, **INDIA**.
3. Research Scholar, Department of Sports Biomechanics, L.N.I.P.E., Gwalior, Madhya Pradesh, **INDIA**.

Email: sargam99santosh7@gmail.com

(Received April 13, 2015, accepted June 02, 2015)

ABSTRACT

The purpose of this study was to investigate the difference of selected kinematic variables of three point shot between first and fourth quarter among the basketball players. A total of five ($n = 5$) best male basketball players of 18 to 23 years old from L.N.I.P.E., Gwalior (M.P.) were selected for the present study as subjects. To acquire kinematical data, a digital Nikon D-3100 video recording camera with a frame rate of 30 frames per second, were used during the execution by placing it right side of players and perpendicular to the sagittal plane. From the video, the photograph of selected both quarters (i.e. first and fourth quarter) were obtained by using snipping tool software. Maxtrac software was used in order to obtain the values of selected angular kinematic variables by developing stick figure. COM also called Height of Center of Gravity was calculated by segmentation method suggested by Hay in 1993. To determine the difference between selected kinematic variables (linear and angular) between both the quarters, paired t-test (with subjects) technique was used. The level of significance was set at 0.05. The results revealed that all selected linear and angular kinematic variables at all the phase had shown insignificant difference ($t < .05$) in the dependant variable. On the basis of results it is concluded that the performance of any games and sports depending upon the multidimensional factors such as physical factors, physiological factors, psychological factors and so many other factors. Only due the slight association in the selected kinematics variables, the performance of the athlete cannot vary directly.