ABSTRACT

AIMS AND OBJECTIVES:

The objectives of the study were to compare the anthropometric and physical parameters of volleyball players playing in different position, to establish an anthropometric and physical profile database for volleyball players at different positions (Attacker, Blocker, Universal, Setter and Libero) in volleyball and to develop a logistic regression model to predict the likelihood of volleyball player according to different playing positions on the basis of selected anthropometric and physical variables.

METHODS:

One hundred four male volleyball players were purposively selected for this study. Out of these, eighteen universal, sixteen libero, sixteen setters, twenty middle blocker, and thirty four attackers, within an age group of 19-33 years were selected from the top eight team of senior national volleyball championship. The study was delimited to only international and national male volleyball players.

Anthropometric and physical variables were selected for the study namely Height (HT), Weight (WT), Arm Length (AL), Hand Length (HL), Palm Width (PW), Arm Girth Relax (AGR), Arm Girth Flexed (AGF), Fore Arm Circumference (FAC), Wrist Circumference (WC), Chest Circumference (CC), Thigh circumference (TC), Calf circumference (CF_C), Ankle Girth (AG), Leg Length (LL), Foot Length (FL), Speed, Shoulder Strength (SS), Explosive Leg Strength (SVJ), Agility (AGTY), Flexibility (FLEX), Abdominal Strength (ABS), and Body Composition (BODY_COMP). Descriptive statistics were used to describe the nature and characteristic of data. For finding out significant difference in different parameters among the selected positions, one way ANOVA was applied and the level of significance was chosen as 0.05. For finding out the contribution of different parameters towards different playing positions, Logistic regression was applied.

RESULTS AND CONCLUSIONS:

Findings of the study showed significant difference among different position in height, weight, arm length, hand length, palm width, arm girth flexed, fore arm circumference, wrist circumference, calf circumference, ankle girth, leg length, foot...
length, speed, shoulder strength, Explosive Leg Strength, flexibility, abdominal strength, and body composition and found no significant difference in arm girth relaxed, chest circumference, thigh circumference and agility. The logistic regression analyses showed that the likelihood of being positional players in volleyball players were significantly predicted by ten parameters namely Height, Arm length, Land length, Palm width, Fore arm circumference, Wrist circumference, Leg length, Speed, Flexibility and Body composition.

**Keywords:** Anthropometric and Physical variables, Playing Positions, Volleyball, logistic regression model.