Study of Anthropometric Measurements and Physical Components of National Netball Players in Sri Lanka

RPT Madushika*[1], WKDSA Wickramarachchi[1], HACS Hapuarachchi[1], and GRAC Gamlath[1]

[1]*Department of Sport Sciences and Physical Education, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka*

**thilinimadu06@gmail.com*

The study aimed to identify the relationship between anthropometric measurements and physical components of Sri Lankan National Netball players' performance. The study was carried out by the experimental research design with 23 female National Netball players. Body mass (kg), height, 17 girth measurements, 7 length measurements (cm) and 7 site skinfold measurements (mm) were taken by CDC 2007 protocol. ANOVA and Spearman correlation test were used for data analysis. There was a positive relationship between the hand length ($r = 0.55$, $p = 0.01$) with speed, Lower leg length, power ($r = -0.15$, $p = 0.05$), flexibility ($r = -0.12$, $p = 0.04$), and muscle strength ($r = -0.15$, $p = 0.05$). Skinfold measurements such as Axilla negatively correlated with speed ($r = -0.52$, $p = 0.01$), agility ($r = -0.42$, $p = 0.04$), aerobic endurance ($r = -0.49$, $p = 0.02$), muscle strength ($r = 0.50$, $p = 0.02$) respectively and the chest ($r = -0.48$, $p = 0.03$), agility ($r = -0.47$, $p = 0.03$), aerobic endurance ($r = -0.57$, $p = 0.01$), muscle strength ($r = -0.51$, $p = 0.01$) respectively. Subscapular and agility ($r = -0.44$, $p = 0.04$), and muscle strength ($r = 0.47$, $p = 0.02$) negatively correlated respectively. Moreover, Supraliac has a negative relationship with speed ($r = -0.48$, $p = 0.02$), aerobic endurance ($r = -0.44$, $p = 0.04$), and muscle strength ($r = -0.4$, $p = 0.05$). Body height and lower leg length significantly varied with the playing positions ($p<0.05$). There were significant differences between the mean at the lower leg length of the attackers (42.18, ± 2.12), defenders (46.06 ± 4.11) and the shooters, (45.90 ± 2.25). Furthermore, defenders have the highest lower leg mean compared with the other positions.

Keywords: Anthropometric Measurements, ANOVA, CDC, Physical Fitness Component