

## Comparison of Health related Physical Fitness Components in Young Male Rugby and Soccer Players in Kotelawala Defence University

RP Siriwardana<sup>1#</sup>, AKMSS Bandaranayake<sup>1</sup> and ADP Perera<sup>1</sup>

<sup>1</sup>Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University,  
Ratmalana, Sri Lanka

#D-PST-19-0028@kdu.ac.lk

### Abstract

Physical fitness plays a major role in determining the player's athletic performance, especially in the games of rugby and soccer. It is essential for implementing specific coaching, strength and conditioning programs for rugby and soccer players. The study aimed to compare health-related fitness components of male rugby and soccer players of Kotelawala Defence University (KDU) in order to facilitate effective coaching programs to improve player performance. The descriptive cross-sectional study was conducted with male rugby (n=15) and soccer players (n=15) aged between 20 to 25 years in KDU, Sri Lanka. Participants were assessed and tested for their body composition Body Mass Index (BMI), muscle percentage and fat percentage, muscular strength, muscular endurance and cardiorespiratory endurance. The collected data were analysed using the Mann-Whitney U test from SPSS version 21 software. The median of weight, body mass index, upper body strength, lower body strength, upper body endurance, and lower body endurance were ( $70.6 \pm 10.5$ ;  $59.2 \pm 5.6$  kg), ( $23.4 \pm 2.8$ ;  $19.9 \pm 1.5$  kgm<sup>-2</sup>), ( $55.0 \pm 8.5$ ;  $40.0 \pm 6.0$  kg), ( $100.0 \pm 26.6$ ;  $58.5 \pm 19.9$  kg), ( $40.5 \pm 4.5$ ;  $32.5 \pm 6.9$  reps per min) and ( $51.5 \pm 7.7$ ;  $45.5 \pm 5.4$  reps per min) of rugby players and soccer players respectively. Cardiorespiratory endurance was not significantly different, but there was a significant difference in body composition, muscular strength, and muscular endurance between the two groups. Sri Lankan university-level rugby players have greater BMI, fat percentage, muscle percentage, muscular strength and muscular endurance than university-level soccer players.

**Keywords:** *Physical fitness, Rugby, Soccer*