RELATIONSHIP BETWEEN BUNKIE-TEST AND SOME SPECIFIC PHYSIOLOGICAL INDICATORS IN RUGBY PLAYERS

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ABSTRACT

The aim of this study was to assess the relationship between the Bunkie-test performance and physiological indicators in Rugby players. Participants were recruited from rugby clubs of Burundi participating in regional competition but not at elite level. Thirty three (33) players, age 19 ± 2 years, height 1.86 ± 0.08 (m) and weight of 88.6 ± 13.5 kg have participated in the present study. Three functional lines (medial stabilizing line, posterior stabilizing line and lateral stabilizing line) of isometric Bunkie-test have been performed. For the physiological indicators, maximal oxygen uptake ($VO_{2\ max}$), pulmonary ventilation (VE) and maximal heart rate (HR_{max}) have also been assessed by using motor- driven treadmill. The independent t-test has been used for measurements comparison between groups. Spearman correlation has been also calculated and significance was set at $p<0.05$. Results show a very weak correlation between Bunkie-test and physiological indicators on some line positions: medial stabilizing line versus HR max ($r=0.32$; $p<0.01$), posterior stabilizing line versus VO_2 max ($r=0.26$; $p<0.01$) and posterior stabilizing line versus HR max ($r=0.27$; $p<0.04$). Other line positions have presented a very strong negative correlation between the Bunkie-test and physiological indicators. These lines are medial stabilizing line versus VO_2 max ($r=-0.34$; $p<0.03$); lateral stabilizing line versus VO_2 max and lateral stabilizing line versus HR max with respectively correlation value $r=-0.35$; $p<0.01$ and $r=-0.32$; $p<0.01$. Based on the findings of this study, the Bunkie-test cannot be a useful tool for evaluating rugby players on their Cardio-respiratory fitness.