

Effects of Core Stability Training on Physical Performances and Core Endurance Among Male Rugby Players: A Randomized Controlled Trial

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Core Stability Training (CST) is used to enhance sports performance despite limited evidence that CST program alone lead to improve athletic performance. Despite the widespread popularity and application of core training, confusion remains regarding the precise performance benefits of and optimal approach to training the core. However, the effect of core stability training on core endurance, speed, agility, upper and lower body power in rugby players had not been evaluated before. Therefore, the objective of this study was to evaluate physical performances and core endurance following a CST intervention in male rugby players. After obtaining informed written consent, sixteen rugby players were assigned to either a core training group [intervention group] (n=8) or to a control training group [control group] (n=8). Intervention group (mean ± SD age, height, and body mass of 25.25 ± 2.4 years, 164 ± 3.0 cm, and 69.6 ± 14.9 kg, respectively) participated in the training program which consisted of static and dynamic CST sessions complementary to the usual physical training, three times per week for six weeks and control group (mean ± SD age, Height, and body mass of 29.75 ± 4.0 years, 166.0 ± 4.0 cm, and 72.3 ± 19.1 kg, respectively) followed the usual physical training. Four tests, (back extensor, abdominal fatigue, right bridge, left bridge) perfomed to measure core endurance. The results revealed significant improvement in lower limb muscle power (p=0.04) in the intervention group. Interestingly, significant difference was noted in right side core endurance (p=0.02) in intervention group compared to control group. Agility, speed and upper limb power were not significantly different in the intervention group (p=0.16, p=0.77, and p=0.40, respectively). Control group did not show any significant difference. This study provides preliminary evidence that CST improves lower limb muscle power and right core endurance without improving other physical performances.

Key words: Core stability, Physical performance, Rugby players

Biography

Mr SADCS Senavirathna is reading for his Master of Philosophy at Faculty of Medicine, University of Ruhuna, Sri Lanka and he is working as a physiotherapy lecturer at Sir John Kotelawala Defence University, Sri Lanka. He has been serving as the acting Head of the Physiotherapy department in 2017. He has completed his Bachelor of Science in Physiotherapy and Diploma in Sport science and exercise from University of Peradeniya, Sri Lanka. He has successfully completed the certificate in Teaching in Higher Education and possesses more than 10 conference publications in his field. His research interest is sport and exercise physiotherapy.

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