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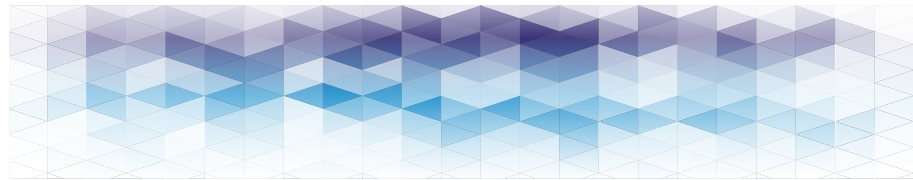
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Relationship between Core Endurance and Upper-body Performance in Spanish men

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Introduction

Core stabilization and endurance exercises are common elements of training programs in fitness and personal training. Theoretically, core endurance permits trunk stabilization for prolonged durations, which in turn, would facilitate force transmission and production during sports and daily life activities (1). Despite that, research regarding the relationship between core endurance and upper body performance in non athletic population is limited. The purpose of this study was to analyze the association between core/trunk endurance and functional upper body performance.

Methods

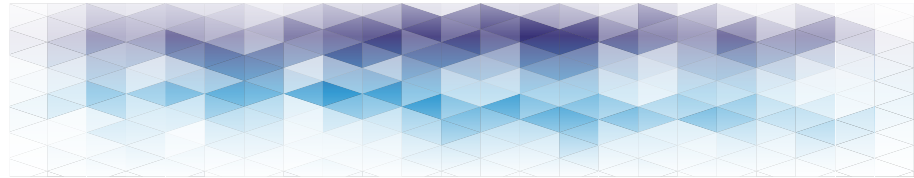
95 Spanish men (12-68 years old) (37.9 ± 10.0 years, 82.47 ± 14.4 kg), performed three tests: knee Push-Ups in one minute, 90° suspended rows in one-minute, and modified flexion-rotation trunk test (FRT) (2) in one-minute. Bivariate correlations represented by the Pearson correlation coefficient were used to identify relationships between test variables. Statistical significance was set at $p=0.05$. SPSS 26.0 software was used for all analyses.

Results

Significant correlations were identified between core FRT test in one-minute (50.97 ± 16.44 reps) and knee Push-Ups in one minute (40.84 ± 12.02 reps) ($r=0.341$; $p=0.001$), and 90° suspended rows in one-minute (25.40 ± 9.17 reps) ($r=0.538$; $p<0.001$).

Discussion

The main finding of this work showed that, in agreement with previous works done with male athletes (3), trunk flexion-rotation endurance displayed a significant, positive but not strong association with two common functional upper-body exercises. These results support recent experimental findings, which showed that core endurance influence the ability to exert maximum force, power and push-ups in a population of young inactive healthy individuals (4).



Conclusion

Individuals with higher core endurance performance had a better performance in upper-body functional exercises, although the significant correlations were weak to moderate.

Key Words: Core, performance, upper body.

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