ABSTRACT

Background: The Functional Movement Screen™ (FMS™) has been the focus of recent research related to movement profiling and injury prediction. However, there is a paucity of studies examining the associations between physical performance tasks such as balance and the FMS™ screening system.

Purpose: The purpose of this study was to compare measures of static balance in stable and unstable conditions between different groups divided by FMS™ scores. A secondary purpose was to discern if balance indices discriminate the groups divided by FMS™ scores.

Study Design: Cross-sectional study.

Methods: Fifty-seven physically active subjects (25 men and 32 women; mean age of 22.9 ± 3.1 yrs) participated. The outcome was unilateral stance balance indices, composed by: Anteroposterior Index; Medial-lateral Index, and Overall Balance Index in stable and unstable conditions, as provided by the Biodex balance platform. Subjects were dichotomized into two groups, according to a FMS™ cut-off score of 14: FMS1 (score >14) and FMS2 (score ≤14). The independent Students t-test was used to verify differences in balance indices between FMS1 and FMS2 groups. A discriminant analysis was applied in order to identify which of the balance indices would adequately discriminate the FMS™ groups.

Results: Comparisons between FMS1 and FMS2 groups in the stable and unstable conditions demonstrated a higher unstable Anteroposterior index for FMS2 (p=0.017). No significant differences were found for other comparisons (p>0.05). The indices did not discriminate the FMS™ groups (p>0.05).

Conclusions: The balance indices adopted in this study were not useful as a parameter for identification and discrimination of healthy subjects assessed by the FMS™.

Level of evidence: 2c.

Key words: Postural balance; Movement System; Physical Function; Physical Therapy Modalities.