ABSTRACT

Background: Dance requires integration and synergy between movement, postural stability, and body alignment to effectively execute the technical and aesthetic requirements of the performance. Evaluation of movement competency and dynamic balance provides opportunity to identify dysfunctional movement which may negatively impact both artistic and technical aspects of dance performance. Investigation of the relationships between movement competency and postural control may aid in technical development, performance improvement, and ultimately injury reduction. Although the Functional Movement Screen™ (FMS™) and Y-Balance Test (YBT) have assessed movement competency in athletes, they have not been used extensively in the performing arts.

Purpose: The purposes of this investigation were to examine movement competency in university dancers using the FMS™ and YBT and to determine the relationship between functional movement and dynamic balance.

Study Design: Cross sectional

Methods: Fifteen, injury-free, female members (19.1 ± 1.18 years old) of an introductory university ballet class volunteered to participate. Pearson product correlations were used to determine relationships between variables.

Results: The mean composite FMS™ score was 15.32 ± 2.30. Shoulder mobility (SM) (r=0.63, p=0.01), In-line lunge (ILL) (r=0.64, p=0.01), and Deep Squat (DS) (r=0.62, p=0.01) were correlated with composite FMS™ score. Overall composite YBT score was 86.62% ± 8.17%. Reach asymmetry was 3.25 cm ± 3.53 cm (anterior), 4.06 cm ± 3.59 cm (posteromedial (PM)), and 3.28 cm ± 2.61 cm (posterolateral (PL)). Composite FMS™ score was not correlated with composite YBT composite score (r=0.44, p=0.10). A moderate to good correlation was found between the ILL and YBT composite score (r=0.64, p=0.01).

Conclusion: Collectively the results indicate the FMS™ and YBT do not measure the same constructs. However, the associations between individual components of the FMS™ and YBT indicate a relationship between certain movements and dynamic balance, supporting their combined use in a dancer injury risk management program.

Level of Evidence: 2b

Keywords: ballet, dynamic balance, functional movement