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Assessment of Functional Movement Screening by Assessors of Three Different Skill Levels

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Cole, McCollister, Greier, Fagan, Froehle,
Curry, Bradford, Muse, Bruce. Assessment of FMS
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Assessment of Functional Movement Screening™ by Assessors of Three Different Skill Levels

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CONTEXT

High intra and inter-rater reliability scores demonstrates a high level of agreement between raters and within the same rater assessing the same person doing the same movement. The Functional Movement Screening is scored through seven functional movement patterns and includes: deep squat, inline lunge, hurdle step, active straight leg raise, shoulder mobility, trunk stability push-up, and rotary stability. The FMS has been promoted as an appropriate pre-participation screening tool to identify individuals who are at risk for musculoskeletal injuries.

OBJECTIVE

The purpose of this study was to examine the intra and inter-rater reliability of FMS between novice, intermediate, and expert level raters.

DESIGN

Cohort design

SETTING

A Midwestern, mid-level, NCAA Division I, university's biomechanical laboratory.

PARTICIPANTS

20 healthy, physically-active, college-age students

INTERVENTION(S)

Six different raters, (two expert, two intermediate, and two novice), graded

subjects' movements on video on two different occasions, one week apart.

MAIN OUTCOME MEASURE(S)

Inter- and intra- rater reliability coefficients

RESULTS

"Intermediate" raters had slightly better ICC means than the "expert" raters. Mean inter-rater reliability across all exercises was best for the intermediate pairing. Best mean of mixed pairings of raters were Intermediate 1-Expert 1 (0.70); Intermediate 1-Expert 2 (0.64); Intermediate 2-Expert 2 (0.57).

CONCLUSIONS

Raters with experience assessing the FMS seem to score more consistently throughout. Novice raters appear to be able to successfully assess the FMS, but lack of experience leading to inconsistent scores. Lack of intra- & inter-rater reliability across the 7 movements regardless of raters' skill is concern.

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