

May 2017

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

Mackenzie Cole

Wright State University, mackcole99@gmail.com

Marissa McCollister

Wright State University, marissa.mccollister@gmail.com

Neil Grieier

Wright State University, nrgrieier@gmail.com

Siobhan Fagan


Wright State University, siobhan.fagan@wright.edu

Andrew Froehle

Wright State University, andrew.froehle@wright.edu

See next page for additional authors

Follow this and additional works at: <http://scholarworks.bgsu.edu/jsmahs>

 Part of the [Biomechanics Commons](#), [Exercise Science Commons](#), [Motor Control Commons](#), [Other Kinesiology Commons](#), [Rehabilitation and Therapy Commons](#), [Sports Medicine Commons](#), and the [Sports Sciences Commons](#)

Recommended Citation

Cole, Mackenzie; McCollister, Marissa; Grieier, Neil; Fagan, Siobhan; Froehle, Andrew; Curry, Nicholas; Bradford, Jason; Muse, Brad; and Bruce, Scott L. (2017) "Assessment of Functional Movement Screening by Assessors of Three Different Skill Levels," *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*: Vol. 3 : Iss. 1 , Article 18.

DOI: 10.25035/jsmahs.03.01.18

Available at: <http://scholarworks.bgsu.edu/jsmahs/vol3/iss1/18>

This Undergraduate Student Abstract is brought to you for free and open access by the Human Movement, Sport and Leisure Studies at ScholarWorks@BGSU. It has been accepted for inclusion in Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association by an authorized editor of ScholarWorks@BGSU.

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

Authors

Mackenzie Cole, Marissa McCollister, Neil Grieier, Siobhan Fagan, Andrew Froehle, Nicholas Curry, Jason Bradford, Brad Muse, and Scott L. Bruce

Cole, McCollister, Greier, Fagan, Froehle,
Curry, Bradford, Muse, Bruce. Assessment of FMS
By Assessors of 3 Different Skill Levels
JSMAHS. 2017;3(1). UG Abstract.

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

Mackenzie Cole, AT, ATC, Marissa McCollister, AT, ATC, Neil Greier, AT, ATC, Siobhan Fagan, MEd, AT, ATC, CSCS, Andrew Froehle, PhD, Nicholas Curry, DC, CCSP, ATC, CSCS, CGFI, Jason Bradford, MEd, CSCS, Brad Muse, MA, AT, ATC, Scott L. Bruce, EdD, AT, ATC

Department of Kinesiology & Health, Wright State University

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.

REFERENCES

1. Beardsley C, Contreras B. The Functional Movement Screen: A review. *Strength Cond J* October 2014; 36(5):72-80.
2. Cook G, Burton L, Hoogenboom B, Voight M. Functional Movement Screening: The use of fundamental movements as an assessment of function part-2. *Int J Sports Phys Ther*. August 2014; 9(4):549-563
3. Gulgin H, Hoogenboom B. The Functional Movement Screening™ (FMS): An inter-rater reliability study between raters of varied experience. *Int J Sports Phy Ther*. 2014; 9(1):14-20.

Cole, McCollister, Greier, Fagan, Froehle,
Curry, Bradford, Muse, Bruce. Assessment of FMS
By Assessors of 3 Different Skill Levels
JSMaHS. 2017;3(1). UG Abstract.

4. Gribble P, Brigle J, Pietrosimone B, Pfile K, Webster K. Intrarater reliability of the Functional Movement Screening. *J Strength Cond Res* April 2013; 27(4):978-981
5. Minick KI, Kiesel KB, Burton L, Taylor A, Plisky P, Butler RJ. Interrater reliability of the Functional Movement Screen. *J Strength & Cond Res* 2010; 24(2):479-486.
6. Onate JA, Dewey T, Kollock RO, et al. Real-time intersession and interrater reliability of the Functional Movement Screen. *J of Strength & Cond Res.* 2012; 26(2):408-415.
7. Shultz R, Anderson SC, Matheson GO, Marcello B, Besier T. Test-retest and interrater reliability of the functional movement screen. *J Athlet Training.* 2013; 48(3):331-336.
8. Smith CA, Chimera NJ, Wright NJ, Warren M. Interrater and intrarater reliability of the functional movement screen. *J Strength & Cond Res.* 2013; 27(4):982-987.
9. Stobierski LM, Fayson SD, Minthorn LM, Valovich McLeod TC, Welch CE. Reliability of clinician scoring of the Functional Movement Screen to assess movement patterns. *J Sport Rehab.* 2015; 24(2):219-222.

KEY WORDS: *Inter-rater reliability, Intra-rater reliability,*