

Assessing Movement Quality in Collegiate Athletes

Patrick Parillo, 4th Year Psychology Major and Dr. Eleanor Beltz, PhD, ATC, CSCS, NASM-CES
Northern Vermont University - Johnson

Background



Movement quality



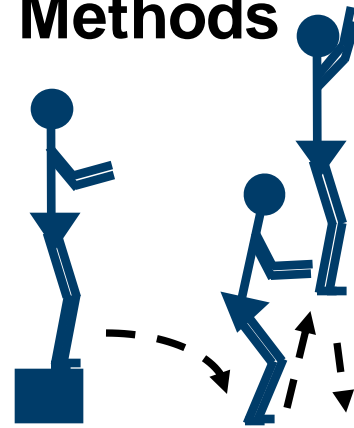
Sport-related injury risk



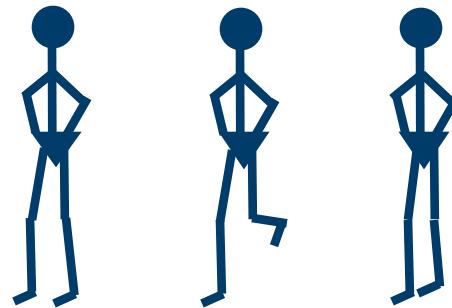
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Methods



Landing Error Scoring System
(LESS)



Balance Error Scoring System
(BESS)



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Results

Intrarater Reliability (BESS):

XX.X% agreement

$K = .####$ (95% CI $.####$, $.####$)

$p < ###$

Data collection 4/1



References

Padua DA, DiStefano LJ, Hewett TE, et al. National Athletic Trainers' Association Position Statement: Prevention of Anterior Cruciate Ligament Injury. *Journal of athletic training*. 2018;53(1):5-19.

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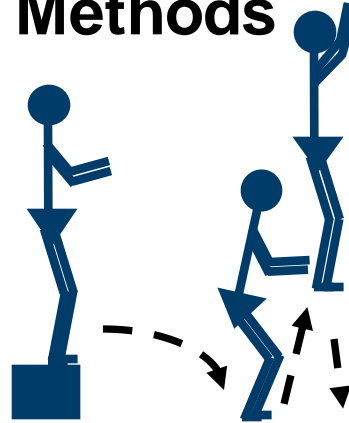
Movement quality



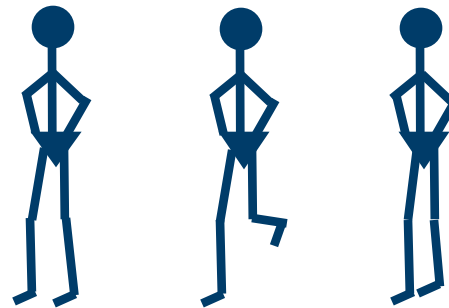
Sport-related injury risk



Methods



Landing Error Scoring System (LESS)



Balance Error Scoring System (BESS)

Results

Table 1. Rater Level of Agreement for BESS

BESS Stance	Mean Bias	Limits of Agreement 95% CI	
		Lower	Upper
Firm DLS	n/a		
Firm SLS	0.4	0.03	0.77
Firm Tandem	0.1	-0.13	0.33
Foam DLS	n/a		
Foam SLS	0.1	-0.82	1.02
Foam Tandem	0.0	-0.83	0.83
Total	0.6	-1.16	2.36

Acknowledgements

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References

Padua DA, DiStefano LJ, Hewett TE, et al. National Athletic Trainers' Association Position Statement: Prevention of Anterior Cruciate Ligament Injury. *Journal of athletic training*. 2018;53(1):5-19.
Houston MN, Hoch MC, Malvasi SR, Peck KY, Svoboda SJ, Cameron KL. Level of Agreement Between Human-Rated and Instrumented Balance Error Scoring System Scores. *Ann Biomed Eng*.