

ORIGINAL RESEARCH

THE INTRA- AND INTER-RATER RELIABILITY OF THE SOCCER INJURY MOVEMENT SCREEN (SIMS)

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ABSTRACT

Background/purpose: The growing volume of movement screening research reveals a belief among practitioners and researchers alike that movement quality may have an association with injury risk. However, existing movement screening tools have not considered the sport-specific movement and injury patterns relevant to soccer. The present study introduces the Soccer Injury Movement Screen (SIMS), which has been designed specifically for use within soccer. Furthermore, the purpose of the present study was to assess the intra- and inter-rater reliability of the SIMS and determine its suitability for use in further research.

Methods: The study utilized a test-retest design to discern reliability. Twenty-five (11 males, 14 females) healthy, recreationally active university students (age 25.5 ± 4.0 years, height 171 ± 9 cm, weight 64.7 ± 12.6 kg) agreed to participate. The SIMS contains five sub-tests: the anterior reach, single-leg deadlift, in-line lunge, single-leg hop for distance and tuck jump. Each movement was scored out of 10 points and summed to produce a composite score out of 50. The anterior reach and single-leg hop for distance were scored in real-time while the remaining tests were filmed and scored retrospectively. Three raters conducted the SIMS with each participant on three occasions separated by an average of three and a half days (minimum one day, maximum seven days). Rater 1 re-scored the filmed movements for all participants on all occasions six months later to establish the 'pure' intra-rater (intra-occasion) reliability for those movements.

Results: Intraclass correlation coefficient (ICC) values for intra- and inter-rater composite score reliability ranged from 0.66-0.72 and 0.79-0.86 respectively. Weighted kappa values representing the intra- and inter-rater reliability of the individual sub-tests ranged from 0.35-0.91 indicating fair to almost perfect agreement.

Conclusions: Establishing the reliability of the SIMS is a prerequisite for further research seeking to investigate the relationship between test score and subsequent injury. The present results indicate acceptable reliability for this purpose; however, room for further development of the intra-rater reliability exists for some of the individual sub-tests.

Keywords: Assessment, association football, kinematic, screening

Level of evidence: 2b

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