Absolute and relative reliability of SCRuM test battery components assembled for schoolboy rugby players playing competitive rugby in low-resource settings: A pragmatic in-season test-retest approach

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Abstract

Background: Schoolboy rugby is a popular sport which forms the bedrock of rugby development in many African countries, including Zimbabwe. With burgeoning talent identification programmes, the development of multi-dimensional, logically- validated, and reliable test batteries is essential to inform the objective selection of potentially talented young rugby athletes. Objectives: This study sought evidence on the absolute and relative test-retest reliability of the component test items in the newly-assembled SCRuM test battery.Methods: Utilising a pragmatic test-retest experimental design, a sample of 41 Under-19 schoolboy players playing competitive rugby in the elite Super Eight Schools Rugby League in Harare, Zimbabwe, participated in the study.Results: Physiological and game-specific skills tests which showed good to excellent relative reliability and acceptable absolute reliability, included: 20 m and 40 m speed, L-run, Vertical Jump (VJ), 60 s Push-Up, 2 kg Medicine Ball Chest Throw test (2 kg MBCT), Wall Sit Leg Strength test (WSLS), Repeated High Intensity Exercise test (RHIE), One Repetition Maximum Back Squat (1-RM BS) and Bench Press tests (1-RM BP), Yo-Yo Intermittent Recovery Level 1 test (Yo-Yo IRT L1), Tackling Proficiency test, Passing Ability Skill test and Running and Catching Ability skill test.Conclusion: All these tests are reliable and warrant inclusion in the SCRuM test battery for possible profiling of U19 schoolboy rugby players during the 'in-season' phase provided there is adequate participant familiarisation and test standardisation. The test-retest ICCs and measurement errors are generalisable to other young athletes in this population, making the tests useful for the evaluation of training and developmental effects of the measured constructs.