

of 18 years, fit for general anaesthetic, with no contraindications for arthroscopy or MRI, and prepared to undergo both. A standard knee arthroscopy was performed and the intra-operative findings were compared with those of the MRI, using the International Chondral Research Society (ICRS) grading for chondral damage, and the presence or absence of a meniscal tear. All MRIs were performed on either a 1.5T or 3.0T MRI machine, using standard sequences.

**Results:** 719 patients were recruited over a period of 6.5 years. Their average age was 52 years (standard deviation, SD 5.2), the male:female ratio was 493:226. Kappa scores with standard errors (SE) for agreement between MRI and knee arthroscopy were 0.41 (SE 0.1) for medial meniscal tears, and 0.44 (SE 0.1) for lateral meniscal tears. For the grade of chondral damage, the Kappa scores with SE values were 0.09 (0.1), 0.17 (0.1), and 0.22 (0.07) for anterior, medial and lateral compartments respectively. Using areas under the receiver operating characteristic curves, we found clinical assessment was more accurate than MRI for diagnosis of lateral meniscal tears ( $P < 0.001$ ), and of similar accuracy for the diagnosis of medial meniscal tears ( $P = 0.12$ ).

**Discussion:** MRI had relatively poor correlation with arthroscopic findings for grading chondral damage and was less accurate than clinical assessment for the diagnosis of lateral meniscal tears. Other research has suggested that MRI is overused in clinical practice and may increase the number of knee arthroscopies performed. Up to 40% of patients diagnosed with a meniscal tear on MRI had no meniscal tear at arthroscopy. Insufficient accuracy will undermine the validity of any research in which this imaging modality has a primary role in the study methodology.

**Conflict of interest declaration:** My co-authors and I acknowledge that we have no conflict of interest of relevance to the submission of this abstract.

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## S70

### The association between prescribed and measured delivery intensity in elite male cricket fast bowlers

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**Background:** A common practice among sport scientists is to prescribe a targeted training load for each training session. Loads captured in training should ideally align with what was prescribed to ensure healthy adaptations. Otherwise, maladaptations to training may occur, predisposing the athlete to overreaching, burnout, illness, or injury. Most workload research in cricket fast bowling has not measured the intensity of a delivery; a key component in profiling the demand of an activity. Elite fast bowlers in Victoria have access to instantaneous feedback on their bowling speed during indoor training that may help them adhere to a prescribed delivery intensity throughout a session. Therefore, the purpose of this investigation was to determine the association between prescribed and measured delivery intensity operationalised as bowling speed.

**Methods:** Six elite male fast bowlers participated in this longitudinal, repeated-measures study conducted during the cricket pre-season of 2018/19. The pre-season bowling programme comprised 14 bowling sessions over 8 weeks (total of 570 deliveries per participant). Each session was planned with a fixed bowling volume (number of deliveries) and prescribed delivery intensity (absolute bowling speed individualised to each participant). Seven prescribed absolute bowling speed thresholds (delivery intensities) were derived and used for each bowler; these were based on approximate matching of absolute ball speeds to relative peak PlayerLoad™ data at 70%, 75%, 80%, 85%, 90%, 95%, and 100% profiled in the 2017/18 season. Absolute bowling speed data was converted to a relative peak for each participant and used for statistical analysis.

Mixed-effects linear regression was used to determine the association between prescribed and measured delivery intensity, while controlling for clustering of repeat trials for each participant. Statistical analyses were conducted in Stata, with statistical significance was set at  $p < 0.05$ .

**Results:** There was a significant, moderate positive relationship between prescribed and measured delivery intensity ( $r = 0.37$ ,  $p = 0.0112$ ). Relative bowling speed was on average 11–17% higher than prescribed, across prescriptions of 70–80%. This difference was reduced to 2.5% at the prescribed delivery intensity of 90%.

**Discussion:** As observed in recent studies, relative bowling speed is markedly elevated at lower prescribed delivery intensities. These findings indicate fast bowlers have difficulty in adhering to lower planned delivery intensities despite instantaneous feedback. Sessions planned at lower prescribed delivery intensities may result in larger variability in load experienced than those planned at higher intensities and contribute to unintended maladaptation's.

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## S72

### Invest in our future! Exploring the athletes' perspectives and experiences of injury prevention practices in women playing elite Australian Football

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**Background:** Women playing in the national elite Australian Football League for Women (AFLW) have a ten times greater risk of serious knee injury than men. Efficacious injury prevention programs exist for team ball-sports, yet their implementation is generally poor. Little is known about how women playing elite team ball-sports perceive and experience injury prevention programs in practice. Understanding the end-user's (athlete's) perspective is essential to improve program uptake and adherence. In this study we explored the athletes' perspectives and experiences of injury prevention practices in the AFLW.

**Methods:** We recruited a convenience sample of 13 athletes from three Melbourne based AFLW clubs who had developed and embedded an injury prevention program. Semi-structured interviews were audio-recorded in 2018 (post-Season 2), transcribed verbatim, analysed with a thematic analysis approach, and classified within the Socio-Ecological Model (SEM).

**Results:** Athletes were on average 25 years old (range 19–31), played a median of 2 AFLW seasons (range 1–2), and had a mean of 8.2 years (range 2–15) of Australian Football experience. Women playing elite Australian Football: 1) believe injury prevention programs can prevent injuries, enhance performance and prolong their football career, 2) perceive that injury prevention practices vary between and within AFLW clubs, 3) believe injury prevention program adoption and implementation is complex and multi-factorial, and 4) think implementing injury prevention programs in the AFLW could be enhanced through education and resource allocation. Barriers to program adoption included lack of knowledge and time, and competing demands. Holistic, gender-specific education, resources and a positive club culture facilitated program use. Athletes suggested that full-time professional contracts and improved resources might enhance implementation. Mapping our results onto the SEM highlighted that athletes perceive that individual, interpersonal, community, and organizational levels are important in sports injury prevention.