Female Football

Injuries and Prevention

Let us stop throwing out the baby with the bathwater: towards better analysis of longitudinal injury data

What did they do? Completed two identical experimental sessions with 26 female soccer players during the two main phases of the menstrual cycle (follicular & luteal phase).

Twelve male soccer players formed a control group.

Why is it important? Muscle imbalance has been found to correlate with lower extremity injuries in a general female athletic population. Understanding the effects of menstrual cycle phase and muscular strength balances in female footballers, where said injuries occur regularly, could be important for the management of injury risk.

Things to consider: Generalised classifications of activity are derived from male datasets. Although these are often used in research, they tend to underestimate match play demands by reducing the amount of high-speed activities completed by female players. Specific thresholds for a female population are required.

Take home message: Isokinetic hamstring-to-quadriceps torque strength balance ratio was diminished in the follicular phase compared to the luteal phase of the non-dominant knee. This information may be useful for practitioners when planning training drills or for the consideration of potential injury risk in training or matches.

Practitioners’ perceptions of the soccer extra-time period: Implications for future research
By L Harper et al. in Proc ONE, Jul 2016

What did they do? Surveyed applied practitioners working in football and asked them whether they perceived the extra-time period as important and which direction future research in this area should take.

Why is it important? Relatively little research concerning the extra-time period in football has been published. It is important for research to reflect the ‘needs’ of applied sport scientists.

Things to consider: Collecting exposure data (amount of time where a football-related injury could occur) can be a difficult task for large-scale studies. Likewise, comprehensive injury recording that accounts for injuries to the same player is challenging with large sample sizes. Estimating exposure is possible, however should be noted as an limitation.

Take home message: Ideally, exposure time and multiple injuries should be taken into account when analysing longitudinal injury data. Practitioners’ perceptions are valuable and prospective cohort studies that do not take exposure time and multiple injuries to the same player into account are limited, they are not necessarily useless; associations between tests and outcomes can still be highlighted.

Training Load and Player Monitoring in High-Level Football: Current Practice and Perceptions

What did they do? Surveyed practitioners from 82 professional football clubs, with questions relating to how they quantify training load, monitor player’s responses, and rate the effectiveness of monitoring.

Why is it important? Providing a snapshot of the current practices and perceptions of monitoring within elite football will serve to highlight the challenges faced by practitioners and stimulate further industry-relevant applied research.

Take home message: A convenience sample approach was used and not all high-level football clubs were approached. In total, 48 surveys were returned (59%), the majority came from clubs based in England (23), the USA (7) and France (4). Thus, a responder bias may be present.

Take home message: No universally adopted monitoring approach exists. Although HR, GPS, and self-report questionnaires are commonly used measures. Despite the importance of monitoring, its perceived impact on injury prevention and performance enhancement is lower than expected.

Fatigue and Recovery

Influence of football match time-motion parameters on recovery time course of muscle damage and jump ability

What did they do? Analysed the post-match recovery time course of creatine kinase and countermovement jump performance parameters for individual match activity parameters.

Why is it important? It is believed that the magnitude of physiological alterations elicited by match play is associated with specific movement demands (i.e. number of sprints, accelerations etc.). Additional knowledge on the physiological effects of a football match may allow the design of individualised recovery strategies.

Take home message: The correlations in the current study were determined after only one match, and should therefore be interpreted with caution. Repeated monitoring of responses after match playing varying demands could provide clearer results.

Take home message: Greater distances covered at higher speeds as well as accelerations and decelerations are associated with greater muscle damage and impaired countermovement jump performance. However, players seem to have varying responses in said parameters to the match demand. Whether these correlate with different activity profiles, was not examined here.

Match Analysis

Match-to-match variability in high-speed running activity in a professional soccer team
By C Carling et al. in J Sports Sci, May 2016

What did they do? Analyzed high-speed match activities (>18 km/h) throughout a season for 12 elite players. This made it possible to determine the match-to-match variability in a variety of frequently reported measures of physical activity.

Why is it important? The psychological aspects of performance in elite football are often left out when analysing physical activity. Pacing could be an apparent factor, with players reuniting from going all out for a few minutes of every match.

Things to consider: Although playing intensity dropped with the calculated match importance, it should be noted that the study only found matches of low importance late in the seasons, when teams could not move in the tables anymore. It seems unlikely that all matches earlier in the season are important, since a match for a team battling for relegation against a team playing for the title seems of less importance than a match against a close competitor.

Take home message: Significant differences in physical activity were found for changing match importance. Thereby it appears that pacing does play a role within the final stages of the season. The importance during earlier phases has to be determined.