High Match Load's Relation to Decreased Well-Being During an Elite Women's Rugby Sevens Tournament.

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Abstract

PURPOSE:: To determine changes in wellbeing, recovery and neuromuscular performance during and after an elite women's rugby sevens tournament and assess the influence of match load indicators.

METHODS:: Twelve elite women rugby sevens players (age 25.3±4.1 y, height 169.0±4.0 cm, weight 63.9±4.9 kg, body fat 18.6±2.7 %) performed 5 matches during a two-day tournament of the Women's Rugby Sevens World Series. Perceived wellbeing (fatigue, sleep quality, general muscle soreness, stress levels, mood), total quality of recovery (TQR), and countermovement-jump flight time (CMJ) were measured on match day 1 (MD1), match day 2 (MD2), 1 day post-tournament (D+1) and 2 days post-tournament (D+2). Total distance, low-, moderate- and high-intensity-running (HIR) and physical contacts (PC) during matches were derived of GPS based time-motion analysis and video-based notational analysis, respectively. Internal match load was calculated by session-rating of perceived exertion (RPE) and playing time (RPE x duration).

RESULTS:: Wellbeing (p<.001), fatigue (p<.001), general muscle soreness (p<.001), stress levels (p<.001), mood (p=.005) and TQR (p<.001) were significantly impaired after match day 1 and did not return to baseline values until D+2. More HIR was related to more fatigue (r=-.60; p=.049) and a larger number of PC with more general muscle soreness (r=-.69; p=.013).

CONCLUSION:: Perceived wellbeing and TQR were already impaired after match day 1 while performance was maintained. HIR and PC were predominantly related to fatigue and general muscle soreness, respectively.

KEYWORDS: Regeneration; load indicators; performance; time-motion; wellness