







## Abstract

# Are microcycles with different training session numbers providing sufficient load for male soccer players? Load, wellness and training/match ratios analysis of a professional team

Rafael Oliveira <sup>1,2,3,\*</sup>, Rui Canário-Lemos <sup>4,6</sup>, Ryland Morgans <sup>5</sup>, Rafael Peixoto <sup>4,6</sup>, José Vilaça-Alves <sup>3,4,6</sup>, João Paulo Brito <sup>1,2,3</sup>

<sup>1</sup> Sports Science School of Rio Maior–Polytechnic Institute of Santarém, 2040-413 Rio Maior, Portugal;

<sup>2</sup> Life Quality Research Centre, 2040-413 Rio Maior, Portugal

<sup>3</sup> Research Centre in Sports Sciences, Health Sciences and Human Development, Vila Real, Portugal;

<sup>4</sup> University of Trás-os-Montes e Alto Douro, 5001-801 Vila Real, Portugal; ruimaldini27@hotmail.com

<sup>5</sup> Football Performance Hub, University of Central Lancashire, Preston PR1 2HE, UK;

<sup>6</sup> Research Group in Strength Training and Fitness Activities, GEETFAA, 5001-801 Vila Real, Portugal

\* Correspondence: [rafaeloliveira@esdrm.ipsantarem.pt](mailto:rafaeloliveira@esdrm.ipsantarem.pt)

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Professional soccer involves varying numbers of training sessions and matches each week, which can influence load distribution. Understanding the exact distribution may allow appropriate load periodisation and planning for players. Thus, this study aimed to (i) compare accumulated load and wellness between weeks with different numbers of training sessions and (ii) compare the training/match ratio (TMr) of external and internal load between weeks with different numbers of training sessions. Ten players with a minimum of 45 minutes of weekly match-play participation were analysed over 16 weeks.

The microcycle structures consisted of three (3dW), four (4dW), five (5dW) and six (6dW) training sessions plus match-day per week. The following measures were used for analysis: duration, fatigue, quality of sleep, muscle soreness, stress, mood, rating of perceived exertion (RPE), session-RPE (s-RPE), high-speed running distance (HSR), sprint distance (SPD), number of accelerations (ACC) and number of decelerations (DEC). Accumulated wellness/load were calculated by adding all training and match sessions, while TMr was calculated by dividing the accumulated load by match data. The main results showed that accumulated wellness and load were significantly different, with moderate to very large effect sizes, except regarding mood, duration, s-RPE, SPD during 5dW vs 6dW and s-RPE, HSR, SPD, ACC and DEC during 3dW vs 4dW (all  $p > 0.05$ ). Moreover, 6dW was significantly higher than 4dW regarding TMr of duration ( $p < 0.05$ , moderate effect size), RPE, HSR and SPD (all  $p < 0.05$  with very large effect sizes) and for 3dW of HSR and ACC ( $p < 0.05$  with very large effect sizes). This study showed that 5dW and 6dW had higher training measures than 3dW or 4dW. Additionally, higher wellness was presented in the microcycles with higher training frequencies. These findings suggest that physical load and wellness were not adjusted according to the number of training sessions within a microcycle.