

QUANTIFICAZIONE DEL CARICO DI LAVORO PERCEPITO E LA SUA RELAZIONE CON I CAMBIAMENTI NELLA PRESTAZIONE FISICA IN GIOVANI CALCIATORI.

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Lo scopo di questo studio è stato di determinare la relazione tra il carico di lavoro (*TL*, *Training Load*) muscolare e respiratorio percepito ed i cambiamenti nella prestazione fisica in giovani calciatori elite e non.

Hanno partecipato allo studio 28 giocatori elite ($n=14$, 17.6 ± 0.6 anni, 70.3 ± 4.4 kg, 179.7 ± 5.6 cm) e non elite ($n=14$, 17.5 ± 0.5 anni, 71.1 ± 6.5 kg, 178.1 ± 5.6 cm) appartenenti a scuole calcio spagnole di prima e terza divisione e partecipanti alla prima divisione spagnola junior (2012-2013). A gennaio e 9 settimane dopo, a marzo, sono stati eseguiti il salto con contromovimento (CMJ), il CMJ a braccia libere, sprint sui 5 e 15 m ed il test di resistenza dell'università di Montreal. Al fine di quantificare il carico di allenamento della seduta, dopo ogni sessione d'allenamento ed ogni partita, i giocatori hanno riportato separatamente i loro punteggi di sforzo percepito (*sRPE*, *sessione Rating of Perceived Exertion*) per l'apparato respiratorio (*sRPE*_{res}) e la muscolatura delle gambe (*sRPE*_{mus}).

Rispetto ai giocatori dilettanti, i giocatori di elite hanno accumulato un maggiore volume di allenamento settimanale (361 ± 14 vs 280 ± 48 minuti; effect size (ES) = 5.23 ± 1.74 ; molto alto), un più alto TL respiratorio percepito (1460 ± 184 vs 1223 ± 260 AU; ES = 1.12 ± 0.79 ; alto) e un più elevato TL muscolare (1548 ± 216 vs 1318 ± 308 AU; ES = 0.99 ± 0.84 ; alto). Il carico di allenamento, l'*sRPE*_{res}-TL e l'*sRPE*_{mus}-TL si sono rivelati fortemente correlati ($r = 0.67 - 0.71$) con i cambiamenti dell'efficienza aerobica.

Tali risultati suggeriscono che un basso volume di allenamento (minuti) ed un basso TL possono pregiudicare il miglioramento del metabolismo aerobico nei giovani calciatori durante il periodo competitivo.

QUANTIFICATION OF THE PERCIVED TRAINING LOAD AND ITS REPATIONSHIP WITH CHANGES IN PHISICAL FITNESS PERFORMANCE IN JUNIOR SOCCER PLAYERS.

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The aim of this study was to determine the relationship between perceived respiratory and muscular training load (TL) and changes in physical fitness in elite and non-elite junior soccer players.

Twenty-eight elite ($n = 14$, 17.6 ± 0.6 years, 70.3 ± 4.4 kg, 179.7 ± 5.6 cm) and non-elite ($n = 14$, 17.5 ± 0.5 years, 71.1 ± 6.5 kg, 178.1 ± 5.6 cm) soccer players belonging to a Spanish first and third division football academies and competing in junior Spanish first division (2012–2013) participated in the study. Countermovement jump (CMJ), CMJ arm swing, 5 and 15 m sprints and the Université de Montreal endurance test were performed in January and 9 weeks later in March. In order to quantify TLs, after each training session and match, players reported their session rating of perceived exertion (sRPE) separately for respiratory (sRPE_{res}) and leg musculature (sRPE_{mus}).

Elite players accumulated greater weekly training volume (361 ± 14 vs. 280 ± 48 min; effect sizes (ES) = 5.23 ± 1.74 ; most likely), and perceived respiratory (1460 ± 184 vs. 1223 ± 260 AU; ES = 1.12 ± 0.79 ; very likely) and muscular (1548 ± 216 vs. 1318 ± 308 AU; ES = 0.99 ± 0.84 ; likely) TL than did nonelite players. Training volume, sRPE_{res}-TL and sRPE_{mus}-TL were positively and largely correlated ($r = 0.67$ – 0.71) with the changes in aerobic fitness.

The present results suggest that a low training volume and TL can impair improvement in aerobic fitness in junior soccer players during the in-season period.

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