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## VARIATIONS OF STRESS LEVELS OF ELITE VOLLEYBALL PLAYERS: WITHIN-WEEK CHANGES AND COMPARISONS BETWEEN PERIODS OF THE SEASON

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This study aims to: (i) analyse the within-week changes of stress levels of elite volleyball players; (ii) analyse the variations of stress between different periods of the season.

Thirteen elite volleyball players (age: 31.0±5.0 years old) were daily monitored for their stress levels during the entire season. The Hooper questionnaire was applied in the morning of each training session or match. The adapted 7-points scale was used. Periods of the season were: (i) pre-season (3 weeks); (ii) early-season (11 weeks); (iii) mid-season (11 weeks); (vi) end-season (11-weeks). Sessions were classified based on the distance to the next match: (i) MD (matchday); (ii) MD-1 (one day before next match); (iii) MD-2 (two days before); (iv) MD-3; (v) MD-4; (vi) MD-5. A two-way ANOVA was performed to identify possible interactions of periods of the season and days of the week to explain the variations of stress. The one-way ANOVA was executed to each factor. Tukey post-hoc test was executed for pairwise comparisons. Results: No significant interaction was found between periods of the season and days of the week ( $p=0.565$ ; partial  $\eta^2=0.006$ ). Significant differences were found of stress between periods of the season ( $p\leq 0.001$ ; partial  $\eta^2=0.017$ ) and days of the week ( $p=0.027$ ; partial  $\eta^2=0.008$ ). Pairwise comparisons revealed significant greater stress in end-season than in early-season (3.09 vs. 2.51 A.U., respectively;  $p\leq 0.001$ ). Pairwise comparisons between days did not reveal significant differences ( $p>0.05$ ), despite MD-1 presented the highest average of stress levels (2.99 A.U.). Conclusions: Understanding and monitoring the levels of stress is crucial to help coaches managing the well-being of their athletes which may impact their performance. Understanding if stress levels vary according to periods of the season helps directing their training. Multidisciplinary teams are vital to reaching a better performance and better levels of well-being in these athletes.