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Training load comparison between small, medium, and large-sided games in professional football

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INTRODUCTION:
Football training aims to develop physical capacities, tactical and technical skills to compete during matches. In the latest years, sided-games, which are categorized as small (SSG), medium (MSG), and large (LSG) formats, have been commonly used by coaches for simultaneously training these capacities and skills. This study aimed to assess if internal and external load parameters were different between sided-game formats, secondly, if these parameters were influenced by players' positions, and finally, if load parameters were different among sided-game types (from 2vs2 to 10vs10) in professional football players.
METHODS:
Twenty-five male professional football players of the same club were enrolled in this study (age = 27 +- 9 years and body mass = 78 +- 14 kg) during the 2022-23 season. Sided-games were categorized in formats as SSG (n =145), MSG (n = 431), and LSG (n = 204). Players were divided into roles such as central backs (CB), fullbacks (FB), central midfielders (CM), attacking midfielders (AM), and strikers (ST). STATSports 10 Hz GNSS Apex units were used to monitor external load parameters such as distance, high-speed running (HSR), sprinting distance, accelerations, and decelerations. The internal load was quantified using the rate of perceived exertion (RPE).
RESULTS:
The linear mixed model analysis found differences between formats ($p < 0.001$) for RPE, distance, HSR, sprinting, accelerations, and decelerations. Differences were found between positions for HSR ($p = 0.004$), sprinting ($p = 0.006$), and decelerations ($p < 0.001$). Moreover, a significant difference was found between sided-game types ($p < 0.001$) for RPE, distance, HSR, sprinting, accelerations, and decelerations.
CONCLUSION:
This study found that some specific sided-games formats were more suitable to load some parameters than others, specifically, the distance, HSR, and sprinting distance covered were greater during LSG compared to MSG or SSG. The number of accelerations and decelerations was higher in MSG compared to SSG. The players' positions influenced some external load metrics, specifically, HSR and decelerations but not RPE or distance per minute. LSG 8vs8 was found to be the most demanding drill for distance covered and LSG 10 vs 10 was found to be the most demanding drill for HSR and sprinting. On the other hand, acceleration and deceleration demands were greater in MSG 5vs5 and MSG 6vs6 compared to other formats.

Topic: **Training and Testing**

Presentation **Poster**

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