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Physical demands comparison of an elite soccer team in Brazil at different competition levels: State, National and International.

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INTRODUCTION:

The difficulties of the Brazilian professional soccer schedule are known worldwide. The teams often compete during the year for state, nationals and internationals championships, being able to lead 75 games a year. Thus, the objective of the present study was to follow the 2022 season of an elite Brazilian soccer professional team and observe whether the different levels of competition - state, national and international - also present different levels of physical demands: for the whole team such as for the player positions.

METHODS:

The study included 37 athletes (24.3 ± 3.9 years; 180.2 ± 4.9 cm; 76.0 ± 6.9 kg; $15.8 \pm 2.3\%$ BF) from the main team, divided into fullbacks ($n=6$; 22.3 ± 2.7 years; 179.0 ± 3.9 cm; 72.8 ± 5.2 kg; $15.1 \pm 2.1\%$ BF), defenders ($n=7$; 24.4 ± 4.3 years; 185.6 ± 1.8 cm; 85.9 ± 9.9 kg; $17.6 \pm 1.7\%$ BF), midfielders ($n=13$; 25.5 ± 4.9 years; 177.6 ± 4.3 cm; 74.0 ± 5.3 kg; $15.9 \pm 2.3\%$ BF) and forwards ($n=11$; 23.5 ± 4.9 years; 180.5 ± 4.3 cm; 75.4 ± 5.3 kg; $15.3 \pm 2.3\%$ BF). The athletes played 5 state games, 44 national games and 15 international games during the season. Players were monitored in all games by a global positioning device at 10 Hz and with inertial motion sensors at 100 Hz (S7 Catapult System). The total distance (TD), the distance covered in high intensity (HSR), the distance covered in sprint (SD), the density (DEN) of the team and of the positions in the field at different competitions were evaluated. After collecting the information, the normality of the data was verified and they proved to be non-parametric, thus, the Kruskal-Wallis test was performed and later the Dunns multiple comparison test was used ($p < 0.05$).

RESULTS:

The most relevant results founded in the present study were detected in DEN and SD. In the DEN we found a statistical difference between the state championship (105.0 ± 11.6 m/min) and the international championships (100.3 ± 10.8 m/min), as well, we founded a difference in this variable for the midfielders between the state (113.2 ± 7.7 m/min) and international (107.2 ± 8.5 m/min) championships. Regarding the SD, a difference was found for forwards between the state (195.5 ± 77.4 m) and national (242.5 ± 130.1 m) championships.

CONCLUSION:

From the data found, we can infer that international championship games have a higher number of fouls and interruptions in the game and this causes a decrease in the DEN of the game, especially when we observe this same variable in the state championship, in which the team is technically superior and can have a higher ball possession, making the distance covered per minute greater. When we observe the SD variable, we find significantly higher values in national championships. Sometimes the team plays more compactly in these competitions, favoring the counterattack and having space to develop this variable when compared to the state championship.

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