Impact of Rest Periods Between Games on Metrics in Division 1 Women's Soccer

Micah Roberson, Ben Snyder
Furman University, Department of Health Sciences, Greenville, SC 29613

Introduction

- In 2022, scheduling for Division 1 Women's Soccer changed from a Friday/Sunday game format to Thursday/Sunday, giving players an extra day of rest between games.
- The effects of fatigue have been well studied in simulated exercise, but it is unclear if these effects are found in real games, when players can pace themselves and circumstances are varying.
- **This study investigated the impact of an additional day of rest between games on performance outcomes in Division 1 women's soccer.**

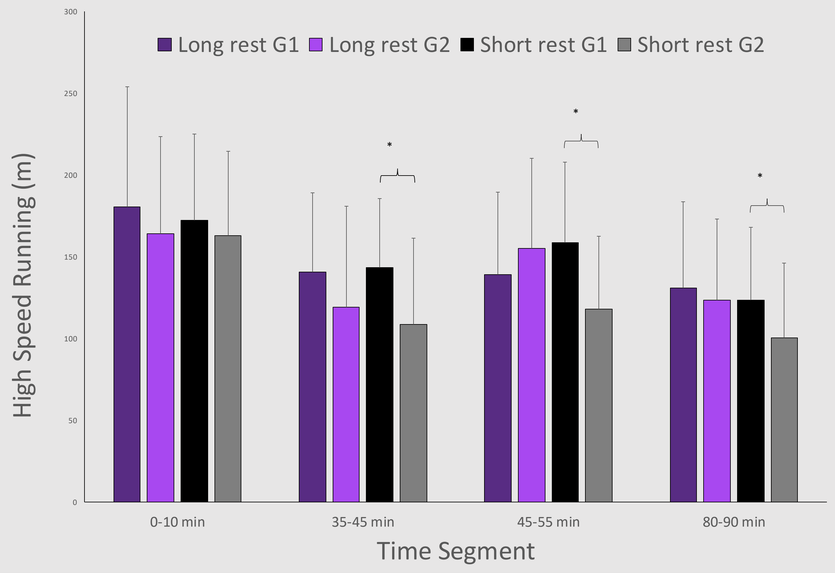
Methods

- Data was collected from StatSports trackers worn by players during games.
- We included data from all field who played 90 minutes in both games of a two-game week, either Friday/Sunday (Short Rest, N = 23) or Thursday/Sunday (Long Rest, N = 24).
- Four 10-minute segments were analyzed per game (0-10 min, 35-45 min, 45-55 min, and 80-90 min) to assess performance metrics (listed below) at different times.
- Mixed ANOVA and a linear mixed model analysis with repeated measures was used to analyze data, with statistical significance set at $p<0.05$.

Results

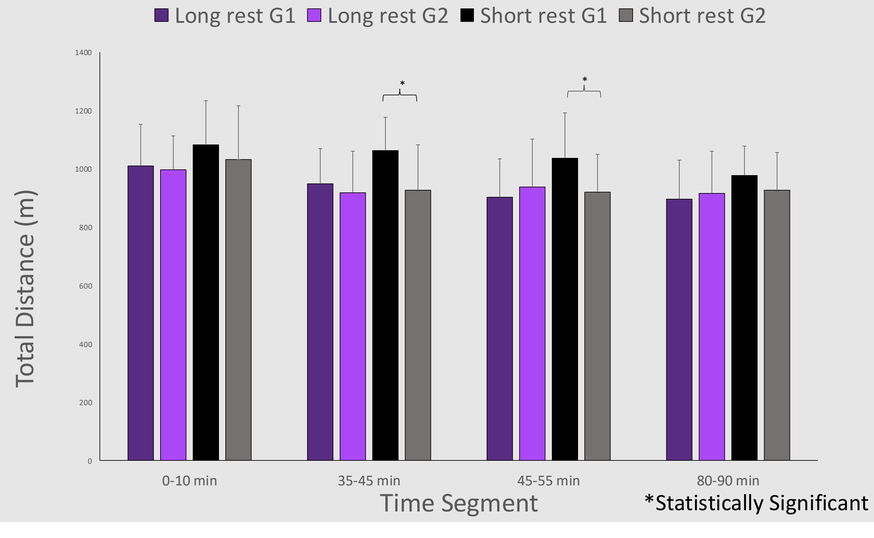
High Speed Running:

- Analysis showed **a significant effect of short rest on high speed running, specifically in the 35-45, 45-55, and 80-90 minute time periods.** Although high speed running was significantly lower in Game 2 than in Game 1 for the short rest group, the long rest group maintained similar levels of high speed running during the second game.

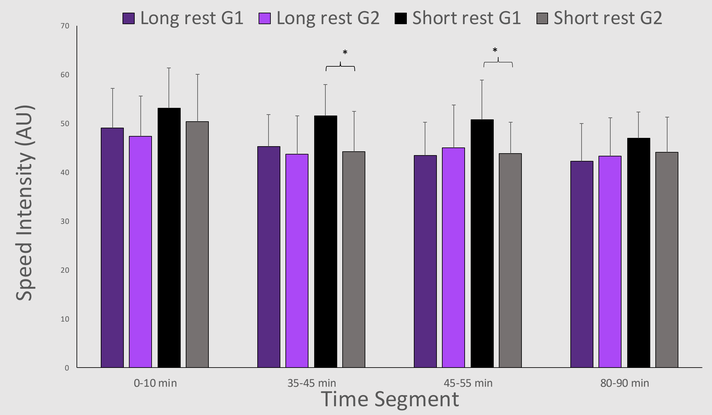


Total Distance:

Mixed model analysis found that there was **a significant effect of rest length on total distance**, specifically in the 35-45 and 45-55 minute time periods.



Speed Intensity:



Analysis showed a significant decrease in speed intensity in the 35-45 and 45-55 min time segment from Game 1 to Game 2 in the short rest group. Similar to the trend seen in total distance, there was a significant decrease in speed intensity in the sum of all four segments for the short rest group.

Discussion

- These findings provide strong evidence that shorter rest between games negatively impacts physical performance.
- **Shorter rest was associated with significantly lower high speed running values in Game 2 and a greater in-game decline across multiple metrics**. The longer-rest group not only maintained higher values of HSR, SI, and TD in Game 2 but also demonstrated a slower rate of decline as the game progressed, suggesting that longer recovery enhances sustained performance.
- Future research should examine this effect across multiple teams and time periods, incorporating more teams and controlling for variables like position.
- This research underscores the role of adequate rest in maintaining performance and reducing injury risk in high-intensity sports. Fatigue is linked to increased injury risk, and the observed declines in high-speed running, speed intensity, and total distance with shorter rest suggest impaired recovery may elevate this risk. Coaches, administrators, and organizations like the NCAA could use these findings to advocate for longer rest periods to optimize both performance and player safety.