

The Total Score of Wellness: A Practical Approach for Monitoring Collegiate Soccer Players' Wellness Utilizing Confidence Intervals

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Purpose

- To examine variations in individual athlete wellness over a competitive season in Division I female soccer players

Methods

- 33 female collegiate soccer players completed daily wellness surveys over the competitive season
- Measured hours of sleep, sleep quality, training ratings of perceived exertion, soreness level, mental load outside of soccer, and the ability to cope with stress, with scores ranging from 1-10
- A daily TSW was calculated by averaging the Z-scores of each variable
- Z-scores were used to create a percentile ranking based on the individual athlete's historical answers
- A standard 95% confidence interval (CI) with upper and lower confidence intervals was determined to assess deviations outside normal ranges
- An extreme CI ($0.5 \times$ standard deviation) was established to capture significant deviations

Results

The total number of questionnaires submitted throughout the season was 606. As a team, the number of occurrences throughout the season outside the 95% CI was 443, and outside the extreme CI was 264.

Conclusions

Instances outside the 95% CI suggested deviations from expected wellness trends, prompting further investigation into specific wellness components for individual players. Extreme cases (outside the extended CI) had fewer instances outside the normal range but indicated critical deviations that could require immediate attention. By using individualized CI ranges, this approach enabled tailored athlete monitoring rather than reliance on team-wide averages.

Practical Applications

The snapshot metric TSW allows for coaches to identify fluctuations in an athlete's wellness on a day-to-day basis. To improve performance and mitigate the risk of injury, coaches may consider adjusting training and recovery plans during the season based on athletes' wellness scores.

Acknowledgments

None

Wellness responses that *deviated beyond each athlete's normal range* were used to identify specific wellness fluctuations for individual players, providing coaches with *real-time insight* for targeted interventions.



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Soccer Wellness Questionnaire

Rate each category from 1-10:

Sleep Duration (Hours of Sleep)



Sleep Quality



Strength & Conditioning RPE



Sports Practice RPE



Overall Soreness Level

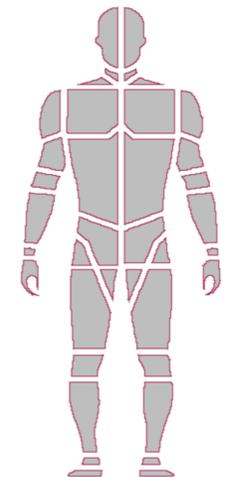


Mental Load Outside Sport



Front Body Map

Select a Body Zone to rate soreness or injury:



Back Body Map

Select a Body Zone to rate soreness or injury:

