

5. SWACSM Abstract

Step It Up: A Pilot Study of the Physical Demands of Division I Team's Soccer Matches Versus Semi-Professional and Collegiate Competition

MADALYN CARRASCO†, ROBERT G. LOCKIE, Ph.D. ‡

Department of Kinesiology, California State University-Fullerton, Fullerton, CA, USA

†Denotes graduate student author, ‡Denotes professional author

Category: Graduate

ABSTRACT

In spring, Division I (DI) men's soccer teams have the opportunity to play collegiate and semi-professional (SP) teams. It could be expected that players on a collegiate team express higher workloads in a match against better competition. GPS data could be used to measure these workloads. However, at the collegiate level some coaches may take away GPS use in matches from some players as disciplinary action. This could impact data recorded by team sport scientists. **PURPOSE:** To compare physical demands measured by GPS metrics of a DI team in matches versus collegiate and SP competition in a real-world environment. **METHODS:** GPS data was collected on 3-12 starters from a DI men's soccer team during 2 matches with DI competition and 2 matches with SP competition (Game 1=12, Game 2=5, Game 3=3, Game 4=5). Coaching staff dictated how many players wore GPS units per match. GPS metrics included: total distance (TD), sprint distance (running at speeds above 5 m/s; SD), top speed (TS), player load (PL), and number of accelerations (athlete increases speed above 3 m/s). Data was combined across the two matches against the different levels of competitions, with the mean of all players in the match used for data analysis. Paired samples t-tests derived any differences in the GPS metrics from collegiate and SP competition. Effect sizes (d) were also calculated. **RESULTS:** There were no statistically significant difference among means ($p=0.525-0.841$). There were large effect sizes for TD, SD, and PL ($d=1.15-1.56$). TS and accelerations had small effect sizes ($d=0.48-0.56$). All metrics were higher in the SP matches compared to the collegiate matches. **CONCLUSION:** The effect size analysis suggested that more work was performed when playing SP teams, as measured by TD, SD, and PL. Even with this increase in overall effort, the team was not successful in these games. Players may not have had the physical capacity to play successfully against the SP teams. This information could be used to emphasize the need for specific conditioning of a collegiate team so they are physically prepared to compete with better competition. It should be noted the number of players analyzed per game impacted the team average as coaches removed GPS use for some players. Ideally, there should be better communication between coaches and support staff regarding the importance of GPS data.