

Establishing individual normative profiles in rugby union

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Introduction

Understanding and quantifying the impact of performance indicators in Rugby Union is a valuable exercise which can produce more effective coaching techniques, enhance individual performance and subsequently can lead to winning matches. However, little research has been undertaken which statistically analyses the role of performance indicators in match outcome.

Methods/Results

This research assessed 30 performance indicators from an International Rugby Union team for the seasons 2014/2015 and 2015/2016. Using One-way ANOVA analysis, 12 (n = 12/30) indicators were found to be significantly different across match outcome. In particular, it was found when percentage Tackle Effectiveness, Post Tackle Pressure effectiveness and percentage tackle completion increased and then games were more likely to be won. Similarly for kicking, it was found that kicking accuracy, line kicking accuracy and goal kicking accuracy were all significantly higher in games that were won corroborating international research that kicking is an integral part of rugby. Using Logistic Regression analysis, an investigation into factors which predict game outcome was also undertaken. It was discovered that both tackle effectiveness and missed tackles could predict match outcome. For every percentage increase in tackle effectiveness, it was quantified that the odds of winning a match increased by a factor of 1.993 or 19.93%. Conversely, when the number of missed tackles increased, then the odds of winning a match were significantly reduced. The final area of interest in this study pertained to the impact of performance indicators at the individual player level.

Discussion & Conclusion

One-way ANOVA analysis was performed across the 12 indicators for each player position. It was found that similar to the overall game performance, indicators like tackle effectiveness were significantly associated with game outcome for numerous player positions. However, for the Number 10, as expected, effective kicking was found to be the dominant indicator at the position level. The results of this study provide a useful benchmark for future game plan design and offer a novel approach to post-game assessment and dissemination of both team and individual performance.

References