

Performance indicators that discriminate winning and losing in elite Men's and Women's Rugby Union.

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Background: Identifying factors that discriminate successful and unsuccessful performance in elite Rugby Union allows coaches to adopt effective tactical strategies for success. Previous research has identified performance indicators that determine success in elite male rugby (Bishop and Barnes 2013), but limited research exists on the female game. Female players spend less time running and experience fewer impacts (Suarez-Arrones et al. 2014) than males (Cunniffe et al. 2009). Since these impact occurrences are primarily associated with tackles, carries and rucks, differences may be expected in the tactical approaches used in men's and women's rugby. The aim of this study was to identify the performance indicators that discriminate winning and losing in elite male and female Rugby Union teams based on the 2015 world cup competitions.

Methods: The study compared the knockout stages of the men's 2015 Rugby World Cup (n=8) and women's 2014 Rugby World Cup (n=8). Performance indicators based on previous literature were coded using Sportscode software and were expressed in terms of area of the pitch. Multiple two-way ANOVAs were used to identify statistical differences both between winning and losing teams and between sexes. In order to allow comparison between groups, effect sizes were determined using Cohen's *d*.

Results: An interaction effect was noted for the percentage of kicks made in the opposition 22-50m, with winners in the men's game kicking more in this area of the pitch than losers (winners = 16.3%, losers = 7.3%), whereas in the women's game losing teams kicked more in this area of the pitch than losers (winners = 9.3%, losers = 19.2%). These findings suggest winning men's teams kicked away more possession in the opposition 22-50m line with a view to gaining territory and pressuring the opposition. Successful women's teams adopted a more possession driven attacking approach in this area of the pitch. Total carries and ruck frequency were similar between winners and losers regardless of sex. In the women's World Cup a trend was noted towards a higher number of total carries by winners (98.13 carries) compared to losers (72.88 carries), with a higher percentage of wide carries and carries following kick receipt compared to losers. These findings suggest successful female teams appear more willing to attack with ball in hand following a kick receipt and adopt a more expansive game through attacking with wider carries in the midfield and outside channels. The percentage of lineouts won on the opposition ball was found to discriminate winners and losers, regardless of sex (line outs stolen, winners = 21.41%, losers = 11.09%). This supports previous knowledge about the importance of the lineout and the emphasis teams should place on defensive strategies which can increase the chances of stealing possession.

Conclusion:

Successful men's and women's teams at the elite level adopt different tactical approaches to knockout based competitions, these findings should be used as a basis for coaches to develop appropriate tactical approaches and training methods which are sex dependent.

References

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