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Non-metric multidimensional performance indicator scaling reveals seasonal and team dissimilarity within the National Rugby League

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Abstract

Objectives: Analysing the dissimilarity of seasonal and team profiles within elite sport may reveal the evolutionary dynamics of game-play, while highlighting the similarity of individual team profiles. This study analysed seasonal and team dissimilarity within the National Rugby League (NRL) between the 2005 to 2016 seasons.

Methods: Total seasonal values for 15 performance indicators were collected for every NRL team over the analysed period (*n* = 190 observations). Non-metric multidimensional scaling was used to reveal seasonal and team dissimilarity.

Results: Compared to the 2005 to 2011 seasons, the 2012 to 2016 seasons were in a state of flux, with a relative dissimilarity in the positioning of team profiles on the ordination surface. There was an abrupt change in performance indicator characteristics following the 2012 season, with the 2014 season reflecting a large increase in the total count of 'all run metres' (*d* = 1.21; 90% CI = 0.56 – 1.83), 'kick return metres' (*d* = 2.99; 90% CI = 2.12 – 3.84) and decrease in 'missed tackles' (*d* = -2.43;