

Weight, height, and experience key to Rugby World Cup success

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Rugby teams with the tallest backs, heaviest forwards, and greatest amount of collective experience are likely to be the most successful at World Cup level, reveals research published online in the *British Journal of Sports Medicine*.

The researchers collected information on the weight, height and age of all players, including starters and substitutes who took part in Rugby World Cup matches between 1987 and 2007.

Players were divided into backs - numbers 9 to 15 - and forwards - numbers 1 to 8, and each team's performance was then assessed according to the age, height, and weight of these two sets of players.

Collective experience was defined as the percentage of players in each team who had participated in the previous World Cup series, and analysed according to player position and the level reached by each team - from quarter-finalists to winners.

During the 20 year study period, 2692 players (1457 forwards and 1235 backs) had taken part in Rugby World Cup series. Of these, 1044 forwards and 866 backs were "rookies" - players who had not competed at World Cup level before.

The data showed that weight progressively increased for forwards and backs, while height progressively increased for backs between each World Cup series.

For all the World Cups, forwards in [teams](#) reaching the quarters, semis, and finals were significantly heavier than those in teams that were not as successful. This was also true of backs in teams reaching the quarters and semis.

On average, forwards and backs in high performing/winning teams weighed around 2 kg more than their less successful counterparts.

"Given the constraints of the game, which directs the play towards more and more physical confrontations, rugby becomes a sport where heavy players become increasingly important," write the authors.

Height was also a factor. Backs in teams reaching the quarters, semis, and finals were significantly taller - around 2 cm taller - than backs in less successful teams. There was a similar trend in height for forwards, although this was not statistically significant.

Winning teams also had a greater amount of collective experience among forwards - almost 40%, compared with just under 32% for other teams.

Furthermore, this percentage increased from quarter-finalist teams (33.4%) to the winning teams (39.6%), emphasising that this is an additional performance factor, say the authors.

They conclude: "Although performance in [rugby](#) is complex and multi-factorial, simple factors such as mass and [height](#) are discriminatory in the armament race. In fact, teams with heavier forwards and taller backs perform better than others."

And they add: "In addition, teams that win a [World Cup](#), arrive in finals, semi-finals and quarter-finals have forwards with greater collective experience than those who do not participate in these matches."

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