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Dale Read<sup>1,2</sup>, Ben Jones<sup>1,2</sup> & Kevin Till<sup>1,2</sup>

[d.read@leedsbeckett.ac.uk](mailto:d.read@leedsbeckett.ac.uk) @DaleRead4

<sup>1</sup>Leeds Beckett University, Institute for Sport, Physical Activity & Leisure, Leeds, UK

<sup>2</sup>Yorkshire Carnegie Rugby Union Football Club, Leeds, UK

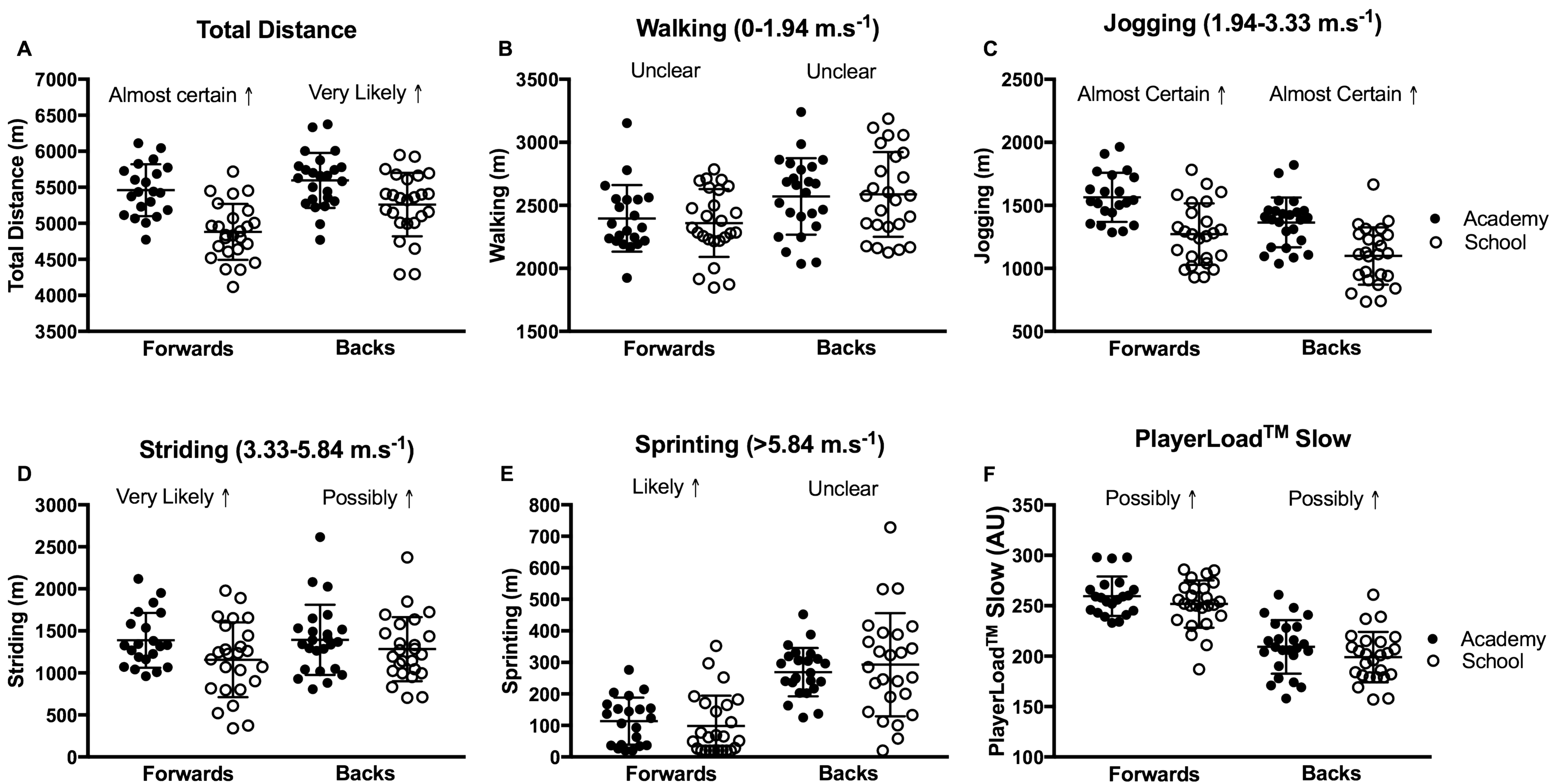
## 1.0 - INTRODUCTION

- The physical demands of match play are well established for senior players domestically (Cahill *et al.*, 2013) and internationally (Quarrie *et al.*, 2013).
- However, despite adolescent rugby union players participating concurrently at various playing standards, no study has investigated the respective physical demands.
- Therefore, the purpose of this study was to compare the physical demands of U18 school and academy rugby union match-play.

## 2.0 - METHODS

- A full season of games ( $n=6$ ) from a Regional Academy were matched by games ( $n=6$ ) from 6 schools.
- The players were split into forwards and backs with only players who participated in the entire game (70 mins) included (Forwards; school [ $n=25$ ], academy [ $n=21$ ] and Backs; school [ $n=25$ ], academy [ $n=24$ ]).
- Match demands were assessed using a microsensor unit (Optimeye S5, Catapult Innovations, Australia) in addition to a heart rate monitor (Polar T31, Polar, Finland).
- All data were analysed using magnitude based inferences.

## 3.0 - RESULTS



Mean heart rate was likely lower in academy forwards than school forwards ( $162 \pm 7$  vs.  $167 \pm 7$  bpm), whilst the difference was unclear between academy and school backs ( $159 \pm 10$  vs.  $159 \pm 9$  bpm).

## 4.0 - DISCUSSION

- Academy rugby union match play is more physically demanding in comparison to school rugby union.
- The difference between academy and school rugby union is similar for both positions
- The lower mean heart rate for forwards suggests that academy forwards are able to complete greater external workloads at a lower internal output.
- Given the opportunities for youth rugby union players to participate for their school alongside an academy, players and coaches should look to prioritise matches that provide the greatest physical challenge (academy) to prepare players for senior rugby union.

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